This Page Is Inserted by IFW Operations and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

THIS PAGE BLANK (USPTO)

WPI;

2001-211457/21

```
RRESULT 3:
AAB9026
IID AAB9
AAB9026
XX AAB9
AC AAB9
XX Huma
DE Huma
XX Huma
KW FHuma
KW FHuma
KW Orga
XX Orga

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                 antiatherosclerotic; immunosuppressive; SAA/FPRL1 complex; ca
immune system disorder; amyloidosis; inflammation; infection;
organ rejection; arthritis; atherosclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis and neoplasia. Fragments of SAA were t for their ability to modulate assembly of the SAA/FPRL1 complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     invention relates to the discovery that SAA is a ligand for FPRLI (formyl peptide receptor variant). A complex has been isolated that comprises a peptide agent with a sequence corresponding to SAA, or conservative variant or functional fragment, bound to FPRLI. Modula of the SAA/FPRLI complex are useful for treating immune system disorders amyloidosis inflammation infection organ rejection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wang
                                                                                                                                                                                                                                                                                             WO200121188-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human SAA carboxy truncation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB90296 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence is a fragment of human invention relates to the discovery that SAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New serum amyloid A and formyl peptide receptor variant complex and i modulators, useful for treating immune system disorders, amyloidosis,
                                                                                                                                                                                     22-SEP-1999;
                                                                                                                                                                                                                                          29-MAR-2001.
                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      inflammation, infection, organ rejection, arthritis, atherosclerosis
and neoplasia •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200121188-A1
                                                                              (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                   22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (USSH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-MAR-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                neoplasia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-211457/21
                                                                                                                                                                                                                                                                                                                                                                                                                                              serum amyloid A; SAA; human formyl peptide receptor variant;
immunomodulatory; antiinflammatory; antimicrobial; antiarthritic;
herosclerotic; immunosuppressive; SAA/FPRL1 complex; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        h 100.0%;
Similarity 100.0%;
4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US DEPT HEALTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oppenheim JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Page 16; 141pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AĄ;
                                                                                                                                                                                     99WO-US21770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-US21770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99WO-US21770.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Su S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 23; [
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO: 54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BEST AVAILABLE COPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gong W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   serum amyloid A (SAA).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Modulators
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
modulators,
                                                                                                                            inflammation,
                                                                                                                        amyloid A and formyl peptide receptor variant complex and s, useful for treating immune system disorders, amyloidosis ion, infection, organ rejection, arthritis, atherosclerosis
                                                                                                  Page 16;
```

Disclosure; 141pp; English.

The present sequence is a fragment of human serum amyloid A (SAA). The invention relates to the discovery that SAA is a ligand for FPRLI (human formyl peptide receptor variant). A complex has been isolated that comprises a peptide agent with a sequence corresponding to SAA, or its conservative variant or functional fragment, bound to FPRLI. Modulators of the SAA/FPRLI complex are useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis and neoplasia. Fragments of SAA were tested for their ability to modulate assembly of the SAA/FPRLI complex. (human

Sequence 56 AA;

밁 Query Match Best Local Matches 42 1 NYDA 4 NYDA 45 4. Similarity Conservative 100.0%; 0 Score 23; Pred. No. Mismatches DB 22; 2.2e+02; 0; Length Indels 0; Gaps 0,

AAB90297 standard; Protein; 57

AAB90297;

01-JUN-2001 (first entry)

Human SAA carboxy truncation, SEQ ID NO:

FPRL1; immunomodulatory; antiinflammatory; antiatherosclerotic; immunosuppressive; SA immune system disorder; amyloidosis; infla rejection; serum amyloid A; SAA; human formyl peptide receptor variant; atory; antimicrobial; antiarthritic; ve; SAA/FPRL1 complex; cancer; inflammation; infection;

Homo

WO200121188-A1

29-MAR-2001

22-SEP-1999; 99WO-US21770

22-SEP-1999; 99WO-US21770.

(USSH) US DEPT HEALTH & HUMAN SERVICES

Wang

Ļ

Oppenheim JJ,

Su Ś

Gong W,

Gao

New serum amyloid A and formyl peptide receptor variant complex and i modulators, useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis

Page 16; 141pp; English.

The present sequence is a fragment of human serum amyloid A (SAA). invention relates to the discovery that SAA is a ligand for FPRL1 (formyl peptide receptor variant). A complex has been isolated that comprises a peptide agent with a sequence corresponding to SAA, or (human

Wang

ŗ,

Oppenheim JJ,

Su

Ś

Gong

Gao

ŗ

Murphy

Ş

밁

33333X3

```
RESULT 34
AAG78507
ID AAG78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                         from a patient comprising administering an amyloid fibril to generate an immune response that promotes in vivo removal of the amyloid fibrils. The methods of this invention are useful for the removal of amyloid deposits from a patient. Other uses include the investigation of AA amyloidosis with a transgenic animal and the evaluating of agents that may be potentially useful in preventing and treating amyloid-related disorders. They may be used for diagnostic assays for monitoring immunoglobulin light chain fibrillogenesis and for identification of the chemical nature of the protein in amyloid deposits that enables the determination of the type of amyloidosis for therapeutic and prognostic applications e.g. in treating Alzheimer's disease, multiple myeloma, neuropathies, cardiomyopathies, monoclonal plasma cell dyscrasis, adult onset diabetes, chronic inflammation, aging, bovine spongiform encephalopathy, Creutzfeldt-Jacob disease and scrapie. AA amyloid is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Removing amyloid deposits from Alzheimer's disease comprises.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of the SAA/FPRL1 complex are useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis and neoplasia. Fragments of SAA were t for their ability to modulate assembly of the SAA/FPRL1 complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nootropic; Neuroprotective; Cytostatic; Cerebroprotective; Cardiant; Anti diabetic; Anti inflammatory; Alzheimer's disease; Multiple myeloma; Neuropathy; Cardiomyopathy; Adult onset diabetes; Monoclonal plasma cell dyscrasis; Inflammation; Aging; Scrapie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   conservative variant or functional fragment, bound to PPRL1 of the SAA/FPRL1 complex are useful for treating immune syste
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UYTE-) UNIV TENNESSEE RES CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-APR-2001; 2001WO-US11043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200177167-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bovine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouse serum amyloid A protein N-terminal fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAG78507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                               invention relates to a method for the removal of amyloid n a patient comprising administering an amyloid fibril to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-663054/76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               spongiform encephalopathy; BSE; Creutzfeldt-Jacob disease; CJD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Amyloidosis; Amyloid fibril;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mediterranean
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fig 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wall
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-194684P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Æ
                        found in various forms of malignancy and in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hrncic R,
method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               m patient used administering
provides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Schell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₩
23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Serum amyloid A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 22;
2.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for treating e. amyloid fibril
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
and stable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Modulators
                                                                                                                                                                                                                                                                                                                                                                                                                       deposits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tested
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

밁

42 NYDA

```
RESULT 35
AAB90298
Š
                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 × 6 6
                       Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                   The present sequence is a fragment of human serum amyloid A (SAA). Invention relates to the discovery that SAA is a ligand for FPRL1 (formyl peptide receptor variant). Al complex has been isolated that comprises a peptide agent with a sequence corresponding to SAA, or
                                                                                                                                                                                                                                                New serum amyloid A and formyl peptide receptor variant complex and modulators, useful for treating immune system disorders, amyloidosis inflammation, infection, organ rejection, arthritis, atherosclerosis
                                                                                                                                                                                                                                                                                                                    Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antiatherosclerotic; immunosuppressive; SAA/FPRL1 complex; cancer; immune system disorder; amyloidosis; inflammation; infection; organ rejection; arthritis; atherosclerosis.
                                                                     Sequence
                                                                                                                              conservative variant or functional fragment, bound to FPRLL Modulators of the SAA/FPRLL complex are useful for treating immune system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     animal model for investigating AA an represents residues 1-58 of a mouse
                                                                                                       arthritis,
                                                                                                                                                                                                              Disclosure;
                                                                                                                                                                                                                                                                                                                                           (USSH)
                                                                                                                                                                                                                                                                                                                                                                  22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                        22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                               29-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                       W0200121188-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human SAA carboxy truncation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB90298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB90298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40 NYDA 43
 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                      neoplasia
                                                                                                                                                                                                                                                                                                                    J,
                                                                                                                             SAA/FPRL1 complex are useful for treating immune system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   immunomodulatory; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 serum amyloid A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4:
                                                                                                                                                                                                                                                                                                                                           US DEPT HEALTH & HUMAN
                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                    Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                            ability
                                                                                            atherosclerosis and neoplasia. Fracability to modulate assembly of the
                                                                      58
                                                                                                                    amyloidosis, inflammation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               58
                       100.0%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                              Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                     AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₽,
                                                                                                                                                                                                                                                                                                                                                                  99WO-US21770.
                                                                                                                                                                                                                                                                                                                                                                                        99WO-US21770.
                                                                                                                                                                                                              16;
                                                                                                                                                                                                                                                                                                                      JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Protein;
                                                                                                                                                                                                            141pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SAA;
                                                                                                                                                                                                                                                                                                                      Su
                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58
                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human formyl peptide receptor variant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ
                                    Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA.
                                                                                                                                                                                                                                                                                                                    Gong
                                                                                                                                                                                                                                                                                                                                           SERVICES
                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amyloidosis. The current sequence serum amyloid A amino acid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IJ
                                                                                                                                                                                                                                                                                                                    Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NO:
                                                                                                        infection, organ rejection,
sia. Fragments of SAA were t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 22;
. 2.3e+02;
0;
                                  2.3e+02;
                                                                                                                                                                                                                                                                                                                      Gao
                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56
                                                                                                       Fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antimicrobial; antiarthritic;
                                                                                             SAA/FPRL1 complex.
                                                                                                                                                                                                                                                                                                                    Murphy PM;
                                              Length 58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                ers, amyloidosis, atherosclerosis
                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                        Gaps
                                                                                                         tested
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                           (human
                                                                                                                                                       its
                                                                                                                                                                                                                                                                       its
                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
RESULT 37
AAB90300
ID AAB90
XX
AC AAB90
XX
DT 01-JU
XX
XX
Human
KW Human
                                                                                                                                                                                                                                                                                          RESULT 36
AAB90299
                                                                                                                                                                                    밁
                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                      Best Loc
Matches
                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                               The present sequence is a fragment of human serum amyloid A (SAA). The invention relates to the discovery that SAA is a ligand for FPRL1 (human formyl peptide receptor variant). A complex has been isolated that comprises a peptide agent with a sequence corresponding to SAA, or its conservative variant or functional fragment, bound to FPRL1. Modulators of the SAA/FPRL1 complex are useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis and neoplasia. Fragments of SAA were tested for their ability to modulate assembly of the SAA/FPRL1 complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FPRL1; immunomodulatory; antiinflammatory; antimicrobial; antiarthritic; antiatherosclerotic; immunosuppressive; SAA/FPRL1 complex; cancer; immune system disorder; amyloidosis; inflammation; infection; organ rejection; arthritis; atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New serum amyloid A and formyl peptide receptor variant complex and its modulators, useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wang
                                       Human SAA carboxy truncation,
                                                                  01-JUN-2001
                                                                                            AAB90300
                                                                                                                     AAB90300 standard; Protein;
                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inflammation, infection, organ and neoplasia -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-MAR-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200121188-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human SAA carboxy truncation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB90299 standard;
                                                                                                                                                                                    42
                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                    NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŗ
serum amyloid A; SAA; human formyl peptide receptor variant;
immunomodulatory; antiinflammatory; antimicrobial; antiarthritic;
                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oppenheim JJ,
                                                                                                                                                                                                                                                                                          59 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 16; 141pp;
                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US21770.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99WO-US21770.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Protein;
                                                                                                                                                                                                                                                100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Su
                                                                                                                                                                                                                                                 0.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ß
                                                                                                                     60 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59
                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                 Score 23;
Pred. No.
                                       SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gong W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gao
                                                                                                                                                                                                                                                 DB 22;
2.3e+02;
                                        58.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Murphy
                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                          (human
                                                                                                                                                                                                                                     0;
```

δĀ

Matches

В

RESULT 38

ABP09824

ABP09824 standard;

Protein;

60

AA

Human

ORFX protein sequence

SEQ ID NO:19630.

(first entry)

WO200192523-A2

myasthenia gravis.

disorder;

rheumatoid

arthritis;

thyroiditis

cardiovascular disease; diabetes mellitus; systemic lupus erythematosus; hypertension; hypothyroidism; cholesterol ester storage disease; immune deficiency; immune disorder; infectious disease;

Human; open reading frame; ORFX; gene therapy; cancer; cirrhosis; hyperproliferative disorder; psoriasis; benign tumour; haemorrhage; degenerative disorder; osteoarthritis; neurodegenerative disorder;

```
Best Local Similarity
                                                                                                                                           Query Match
                                                                                                                                                                                                                                 The present sequence is a fragment of human serum amyloid A (SAA). The invention relates to the discovery that SAA is a ligand for FPRLI (human formyl peptide receptor variant). A complex has been isolated that comprises a peptide agent with a sequence corresponding to SAA, or its conservative variant or functional fragment, bound to FPRLI. Modulators of the SAA/FPRLI complex are useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis and neoplasia. Fragments of SAA were tested for their ability to modulate assembly of the SAA/FPRLI complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New serum amyloid A and formyl peptide receptor variant complex and its modulators, useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antiatherosclerotic; immunosuppressive; SAA/FPRL1 complex; cancer;
immune system disorder; amyloidosis; inflammation; infection;
organ rejection; arthritis; atherosclerosis.
                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200121188-A1
42 NYDA 45
                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     neoplasia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J,
                                                                                             4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oppenheim JJ,
                                                                                                                                                                                              60
                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page
                                                                                                                                                                                              AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-US21770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-US21770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16;
                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     141pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SuS,
                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     English.
                                                                                                                  Score 23; DB 22;
Pred. No. 2.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gong W,
                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Murphy PM,
                                                                                                                                           Length 60;
                                                                                             Indels
                                                                                             0,
                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                           (human
                                                                                             0
```

Wang

```
RESULT 39
AAB90301
ID AAB90
XX AAB90
AC AAB90
XX 01-JU
XX 01-JU
XX Human
XX FPRLI
KW FPRLI
KW immun
XX immun
XX immun
XX immun
XX immun
XX immun
XX immun
                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes substantially purified human proteins CC (referred to as open reading frame, ORFX, where X is 1-11491 (see Table 1 (referred to as open reading frame, ORFX), where X is 1-11491 (see Table 1 or Table 1). ABM15762 to ABM27252 encode the human ORFX CC in the specification). ABM15762 to ABM27252 encode the human ORFX CC proteins given in ABP00010 to ABP11500. ORFX proteins are useful for CC disorder in humans, and in the manufacture of a medicament for treating a CC sequence can be used in the manufacture of a medicament for treating a CC sequences can be used in gene therapy. ORFX sequences can be used in the CC treatment of cancer, hyperproliferative disorders, cirrhosis of liver, osteoarthritis, neurodegenerative disorders, disorders, haemorrhage, CC storage disease, various immune disorders, disorders mellitus, systemic CC transplantation, cardiovascular diseases, disorders mellitus, systemic CC storage disease, various immune deficiencies and disorders, infectious CC diseases, autoimmune disorders such as multiple sclerosis, rheumatoid CC diseases, autoimmune inflammatory eye disease. ORFX proteins are also cuseful for treating burns, incisions, nlocase, for treating are also constituted to correct treating burns, incisions, nlocase, for treating are also constituted to correct treating burns, incisions, nlocase, for treating are also constituted to correct treating burns, incisions, nlocase, for treating are also constituted to correct treating burns, incisions, nlocase, for treating are also constituted to correct treating burns, incisions, nlocase, for treating are also constituted to correct treating burns, incisions, nlocase, for treating are also constituted to correct treating burns, incisions, nlocase, for treating are also constituted to correct treating burns, incisions, nlocase, for treating treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                 antiatherosclerotic; immunosuppressive;
                   Homo sapiens
                                                                                                                                                                                                   Human
                                                                                                                                                                                                                                                 01-JUN-2001
                                                                                        immune system
                                                                                                                                                                                                                                                                                              AAB90301;
                                                                                                                                                                                                                                                                                                                               AAB90301 standard; Protein; 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bone degenerative disorders, incisions, ulcers, for treating osteop protection or regeneration and treatment of lung or liver fibrosis reperfusion injury in various tissues and conditions resulting fixed systemic cytokine damage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 specification,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel human polypeptides and polynucleotides useful for diagnosing, preventing and treating cardiovascular disease, neurodegenerative, humanoroliferative disorders and autoimmune disorders -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-106308/14.
N-PSDB; ABN25576.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAY-2000;
29-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (CURA-) CURAGEN CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                  NYDA
                                                           rejection;
                                                                                                                                                                                          SAA carboxy truncation,
                                                                                     serum amyloid A; SAA; human formyl peptide receptor variant;
immunomodulatory; antiinflammatory; antimicrobial; antiarthritic;
herosclerotic; immunosuppressive; SAA/FPRL1 complex; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence data for this patent did not form part of the printed fication, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                  57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID 19630;
                                                                                   disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ã,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-206132P.
2000US-228716P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001WO-US10836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1037pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 23;
Pred. No.
                                                                                                                                                                                            SEQ ID NO: 59.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               English.
                                                                            inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 2.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   conditions resulting from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fibrosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      osteoporosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
RESULT 40
AAB90302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
WPI; 2001-211457/21
                        Wang J,
                                                                                                                                                                                            Human; serum amyloid A; SAA; human formyl peptide receptor variant; FPRL1; immunomodulatory; antiinflammatory; antimicrobial; antiarthr antiatherosclerotic; immunosuppressive; SAA/FPRL1 complex; cancer; immune system disorder; amyloidosis; inflammation; infection;
                                                                                             22-SEP-1999;
                                                                      22-SEP-1999;
                                                                                                                    29-MAR-2001.
                                                                                                                                         WO200121188-A1
                                                                                                                                                                                          organ
                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                           Human SAA carboxy truncation,
                                                                                                                                                                                                                                                                                      01-JUN-2001
                                                                                                                                                                                                                                                                                                             AAB90302;
                                                                                                                                                                                                                                                                                                                                AAB90302 standard; Protein; 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence is a fragment of human serum amyloid A (SAA). The invention relates to the discovery that SAA is a ligand for FPRL1 (human formyl peptide receptor variant). A complex has been isolated that comprises a peptide agent with a sequence corresponding to SAA, or its conservative variant or functional fragment, bound to FPRL1 Modulators of the SAA/FPRL1 complex are useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis and neoplasia. Fragments of SAA were tested for their ability to modulate assembly of the SAA/FPRL1 complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New serum amyloid A and formyl peptide receptor variant complex and its modulators, useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                            42 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-211457/21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200121188-A1
                                                                                                                                                                                                                                                                                                                                                                                                                   1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                        rejection;
                                                US
                                                                                                                                                                                                                                                                                                                                                                                                                                         4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US DEPT
                                                                                                                                                                                                                                                                                                                                                                                              45
                                            DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oppenheim JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Page 16; 141pp; English.
                                                                                                                                                                                                                                                                                  (first entry)
                                                                     99WO-US21770
                                                                                           99WO-US21770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99WO-US21770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99WO-US21770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HEALTH & HUMAN
                    JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sus,
                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                           QES
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
Pred.
                     Gong
                                                                                                                                                                                                                                                                                                                                  AA
                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gong W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SERVICES
                                                                                                                                                                                                                                                          ÎD NO: 60.
                     Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   23;
No.
                    Gao J,
                                                                                                                                                                                                         ry; antimicrobial; antiarthritic; SAA/FPRL1 complex; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 22;
2.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gao J,
                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                  Murphy PM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Murphy PM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (human
                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

```
RESULT 41
AAB90303
    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence is a fragment of human serum amyloid A (SAA). The invention relates to the discovery that SAA is a ligand for FPRLI (human formyl peptide receptor variant). A complex has been isolated that comprises a peptide agent with a sequence corresponding to SAA, or its conservative variant or functional fragment, bound to FPRLI. Modulators of the SAA/FPRLI complex are useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis and neoplasia. Fragments of SAA were tested for their ability to modulate assembly of the SAA/FPRLI complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                               antiatherosclerotic; immunosuppressive; SAA/FPRL1 complex; ca
immune system disorder; amyloidosis; inflammation; infection;
organ rejection; arthritis; atherosclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; serum amyloid A; SAA; human formyl peptide receptor variant; FPRL1; immunomodulatory; antiinflammatory; antimicrobial; antiarthritic; antiatherosclerotic; immunosuppressive; SAA/FPRL1 complex; cancer;
The present sequence is a fragment of human serum amyloid A invention relates to the discovery that SAA is a ligand for informyl peptide receptor variant). A complex has been isolated comprises a peptide agent with a sequence corresponding to SI conservative variant or functional fragment, bound to FPRL1.
                                                                                          Disclosure; Page 16; 141pp; English.
                                                                                                                                                    New serum amyloid A and formyl peptide receptor variant complex and its modulators, useful for treating immune system disorders, amyloidosis,
                                                                                                                                                                                                     WPI; 2001-211457/21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB90303 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 16; 141pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      modulators, useful inflammation, infe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New serum amyloid A and formyl peptide receptor variant complex and its modulators, useful for treating immune system disorders, amyloidosis,
                                                                                                                                                                                                                                                                (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                              22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                            29-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                         W0200121188-A1
                                                                                                                                       inflammation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SAA carboxy truncation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.
                                                                                                                                                                                                                                   Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                               infection,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          infection, organ rejection, arthritis, atherosclerosis
                                                                                                                                                                                                                                                                                                99WO-US21770
                                                                                                                                                                                                                                                                                                                            99WO-US21770
                                                                                                                                                                                                                                  JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 23; 100.0%; Pred. No.
                                                                                                                                                                                                                                   Su
                                                                                                                                        organ
                                                                                                                                                                                                                                  ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ
                                                                                                                                                                                                                                Gong
                                                                                                                                        rejection, arthritis, atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ID NO:
                                                                                                                                                                                                                                  ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; DB 22;
. 2.4e+02;
ches 0;
                                                                                                                                                                                                                                   Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61.
                                                                                                                                                                                                                                'n
                                                                                                                                                                                                                                Murphy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                               isolated that
                                               for FPRL1
               SAA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
               or its
                                              (human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

Ş

1 NYDA 4

Best Loc Matches Query Match

Local

Similarity

0;

Mismatches

.5e+02;

Indels

0;

Gaps

0

```
RESULT 4
AAB90304
ID AAB
                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                               invention relates to the discovery that SAA is a ligand for FPRL1 (huma formyl peptide receptor variant). A complex has been isolated that comprises a peptide agent with a sequence corresponding to SAA, or its conservative variant or functional fragment, bound to FPRL1. Modulators of the SAA/FPRL1 complex are useful for tracting immune system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of the SAA/FPRL1 complex are useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection arthritis, atherosclerosis and neoplasia. Fragments of SAA were for their ability to modulate assembly of the SAA/FPRL1 complex.
                                                                           disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis and neoplasia. Fragments of SAA were tfor their ability to modulate assembly of the SAA/FPRL1 complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antiatherosclerotic; immunosuppressive;
immune system disorder; amyloidosis; inf
                                                    Sequence
                                                                                                                                                                                   The present sequence is a fragment of human serum amyloid A (SAA).
                                                                                                                                                                                                                                        inflammation, and neoplasia
                                                                                                                                                                                                                                                                  modulators,
                                                                                                                                                                                                                                                                                                          WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human SAA carboxy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-2001
                                                                                                                                                                                                                Disclosure;
                                                                                                                                                                                                                                                               New serum amyloid A and formyl peptide receptor variant complex and its modulators, useful for treating immune system disorders, amyloidosis,
                                                                                                                                                                                                                                                                                                                                                                                         22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                 22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                            29-MAR-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200121188-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FPRL1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB90304;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB90304 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                             (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rejection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunomodulatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            serum amyloid A; SAA; human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                   Oppenheim JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     45
                                                    64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63 AA;
100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                             Page 16; 141pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                    AA;
                                                                                                                                                                                                                                                     infection, organ
                                                                                                                                                                                                                                                                                                                                                                                         99WO-US21770
                                                                                                                                                                                                                                                                                                                                                                                                                 99WO-US21770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      truncation,
                                                                                                                                                                                                                                                                                                                                   Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antiinflammatory;
                                                                                                                                                                                                               English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 23; DE
Pred. No. 2.5
0; Mismatches
            Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                     rejection, arthritis, atherosclerosis
                                                                                                                                                                                                                                                                                                                                   Gong W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         formyl peptide receptor variant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ve; SAA/FPRL1 complex; cancer;
inflammation; infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NO:
                                                                                                                                                                                                                                                                                                                                   Gao
                          DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antimicrobial; antiarthritic;
                                                                                                                                                                                                                                                                                                                                   ŗ
                                                                                                                                                                                                                                                                                                                                   Murphy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organ rejection,
nts of SAA were tested
                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                           tested
                                                                                                                                                                       (human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

В

42

NYDA

45

```
RESULT 43
AAB90383
ID AAB90
XX AAB90
XX AAB90
XX Huma
DE Huma
XX Huma
KW EPRI
KW Ant:
KW Ant:
KW Ant:
XX Org
YX Or
RESULT 44
AAB90483
ID AAB90
XX
AC AAB90
XX
DT 01-JU
XX
DE Humar
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 4
                           Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present sequence is a fragment of human serum amyloid A (SAA). The invention relates to the discovery that SAA is a ligand for FPRL1 (human formyl peptide receptor variant). A complex has been isolated that comprises a peptide agent with a sequence corresponding to SAA, or its conservative variant or functional fragment, bound to FPRL1. Modulators of the SAA/FPRL1 complex are useful for treating immune system
                                                                               01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis and neoplasia. Fragments of SAA were tested for their ability to modulate assembly of the SAA/FPRL1 complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New serum amyloid A and formyl peptide receptor variant complex and its modulators, useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; serum amyloid A; SAA; human formyl peptide receptor variant; FPRLI; immunomodulatory; antiinflammatory; antimicrobial; antiarthritic; antiatherosclerotic; immunosuppressive; SAA/FPRLI complex; cancer; immune system disorder; amyloidosis; inflammation; infection;
                                                                                                                                    AAB90483
                                                                                                                                                                                  AAB90483 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200121188-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and neopiasia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-MAR-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB90383 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                      _
                                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                                                                                                                                                                                                                                                                                                      NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-211457/21
                           SAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SAA amino truncation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rejection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oppenheim JJ,
                           internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64
                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page 20;
                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US21770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US21770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                arthritis; atherosclerosis
                           truncation,
                                                                                                                                                                                  Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   141pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sus,
                                                                                                                                                                                     64
                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 23;
Pred. No.
                                                                                                                                                                                     ĀΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gong W,
                           SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                           ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          141
                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 22;
2.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gao J,
                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Murphy PM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

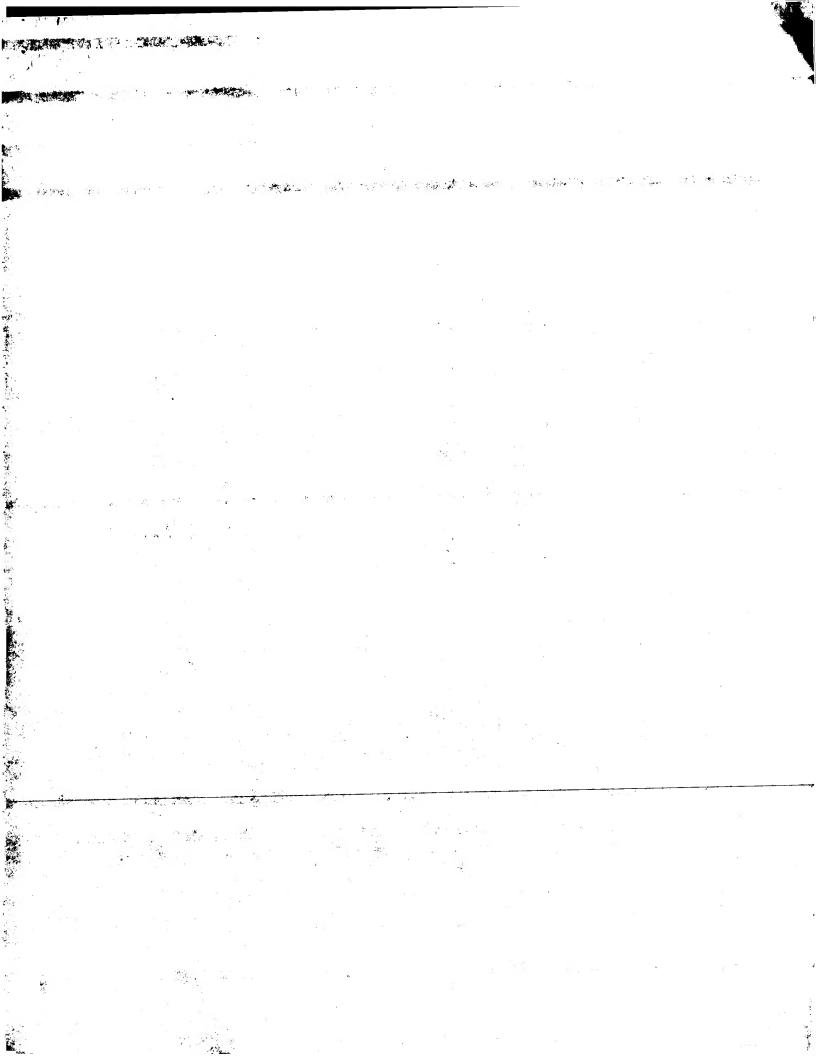
10-DEC-1996;

96US-0032542 97WO-US22724 밁 Qy

```
AAW62372
ID AAW6
                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis and neoplasia. Fragments of SAA were t for their ability to modulate assembly of the SAA/FPRL1 complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence is a fragment of human serum amyloid A (SAA). invention relates to the discovery that SAA is a ligand for FPRL1 (formyl peptide receptor variant). A complex has been isolated that comprises a peptide agent with a sequence corresponding to SAA, or conservative variant or functional fragment, bound to FPRL1. Modula of the SAA/FPRL1 complex are useful for treating immune system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New serum amyloid A and formyl peptide receptor variant complex and its modulators, useful for treating immune system disorders, amyloidosis, inflammation, infection, organ rejection, arthritis, atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; serum amyloid A; SAA; human formyl peptide receptor variant; FPRLI; immunomodulatory; antiinflammatory; antiinfcrobial; antiarthritic; antiatherosclerotic; immunosuppressive; SAA/FPRL1 complex; cancer; immune system disorder; amyloidosis; inflammation; infection; organ rejection; arthritis; atherosclerosis.
10-DEC-1997;
                                                                                    W09825970-A1
                                                                                                                                                                                             divalent
                                                                                                                                                                                                                                                             Antithrombotic
                                                                                                                                                                                                                                                                                                        01-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                             AAW62372 standard; peptide; 65 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and neoplasia
                                         18-JUN-1998
                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                 Antithrombotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (USSH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200121188-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'n,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-211457/21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SD
                                                                                                                                                                                             mbotic peptide; fibronectin type II repeat; platelet;
cation-independent adhesion; vascular injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oppenheim JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEPT HEALTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Page 28; 141pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA,
                                                                                                                                                                                                                                                             peptide SEQ ID NO:19 from WO9825970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-US21770.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US21770.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SuS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ¥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 22;
2.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Murphy PM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Modulators
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   that
A, or its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tested
```

0

```
밁
Search completed: February 6, 2003, 11:19:41 Job time: 28.8333 secs
                                                                                                                           Query Match 100.0%; Score 23; DB 19; Length 65; Best Local Similarity 100.0%; Pred. No. 2.6e+02; Matches 4; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                         The present sequence represents a peptide from the example of the present invention, which describes antithrombotic peptides derived from human fibronectin type II repeats. The peptides can mediate divalent cation-independent adhesion of platelets to fibronectin. They can therefore be used to aid in the initiation of recovery from vascular injury.
                                                                                                                                                                                                                                                                                                                                           Example; Fig 3; 55pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-348460/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Santoro SA, Staatz WD;
                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                           New anti-thrombotic peptide(s) - used to aid in initiation of recovery from vascular injury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UNIW ) UNIV WASHINGTON.
                                                            1 NYDA 4
||||
47 NYDA 50
                                                                                                                                                                                             65 AA;
                                                                                                                            0;
                                                                                                                            Gaps
                                                                                                                              0;
```



```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB :
Maximum DB :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT943-5
23
Issued_Patents_AA:*
1: /cgn2-6/ptodata/1/
2: /cgn2_6/ptodata/1/
3: /cgn2_6/ptodata/1/
4: /cgn2_6/ptodata/1/
5: /cgn2_6/ptodata/1/
6: /cgn2_6/ptodata/1/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      February 6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapop 10.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                262574 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 5.1.3
Copyright (c) 1993 - 2003 Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum Match 100%
Maximum Match 100%
Listing first 45 su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nyda 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Match
                                                                    100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/b_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
      65
104
104
1122
149
152
152
152
152
175
175
175
175
175
177
214
215
229
229
229
229
230
250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2003, 11:16:04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29422922 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
    US-09-296-284-13
5180819-6
US-08-752-844-6
US-08-91-196-6
US-08-91-136-218-19
US-09-136-218-19
US-09-136-218-19
US-09-134-01C-4639
US-09-134-01C-4639
US-09-134-001C-4747
US-09-134-001C-4623
US-09-134-001C-4623
US-09-134-001C-4623
US-08-858-207A-339
5180819-3
US-08-944-483-30
US-08-394-600B-20
US-08-394-600B-20
US-09-230-196-18
US-09-230-196-18
US-09-230-196-18
US-09-33-761A-80
US-08-378-761A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Search time 9.33333 Seconds (without alignments) 12.610 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ltd
                  Sequence 13, Appl patent No. 5180819
Sequence 6, Appli sequence 19, Appli sequence 19, Appli sequence 2, Appli sequence 2, Appli sequence 4, Appli sequence 4, Appli sequence 4, Appli sequence 4, Appli sequence 2, Appli sequence 33, Appli sequence 30, Appli sequence 452, Appli sequence 339, Appli sequence 30, Appli sequence 20, Appli sequence 30, Appli sequen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
```

ţ

```
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
                             256
263
280
292
292
292
292
306
306
306
306
355
355
355
342
447
447
447
447
                            2 US-08-230-428B-4
2 US-08-752-844-65
2 US-08-752-844-65
2 US-09-296-284-27
3 US-08-555-568B-19
3 US-08-519-223-19
3 US-08-976-838-13
3 US-08-976-838-13
3 US-09-000-040-3
3 US-09-000-040-3
3 US-09-000-040-2
3 US-09-134-0012-4848
3 US-09-134-0012-4848
3 US-09-074-512-1
3 US-09-074-512-1
3 US-09-072-873-2
3 US-09-134-0012-3354
3 US-09-134-0012-3354
ALIGNMENTS
                                     Sequence 4, Appli
Sequence 27, Appl
Sequence 27, Appl
Sequence 19, Appl
Sequence 13, Appl
Sequence 13, Appl
Sequence 13, Appl
Sequence 13, Appl
Sequence 2, Appli
Sequence 2, Appli
Sequence 20, Appli
Sequence 20, Appli
Sequence 20, Appli
Sequence 21, Appli
```

```
RESULT 1
US-09-296-284-13
US-09-296-284-13
US-09-296-284-13
Sequence 13, Application US/09296284A
Sequence 13, Application US/09296284A
Sequence 13, Application US/09296284A
Sequence 14, Sequence 15, Sequence 14, Sequence 14, Sequence 14, Sequence 14, Sequence 15, Sequence 14, Sequence 15, Sequence 1711LOF INVENTION: Gluconobacter Suboxydans Sorbitol Dehydrogenase, Genes 1711LOF INVENTION: and Methods of Use Thereof 1711LOF INVENTION: and Methods of Use Thereof 1711LOF INVENTION NUMBER: US/09/296,284A
CURRENT PEPLICATION NUMBER: US/09/296,284A
CURRENT PEPLICATION NUMBER: US/09/296,284A
CURRENT PEPLICATION UNMBER: US/09/296,284A
SOFTMARE: Patentin Ver. 2.0
SEQ ID NO 13
LENGTH: 7
TYPE: PRT
ORGANISM: Gluconobacter suboxydans
US-09-296-284-13
                                                                                                                                                                                                                                                                                                       ; PATENT NO. 5180819
; PAPLICANT: CAYRE, YVON
; APPLICANT: CAYRE, PURIFIED MYELOBLASTIN, NUCLEIC ACID
; TITLE OF INVENTION: PURIFIED MYELOBLASTIN, NUCLEIC ACID
; MOLECULE ENCODING SAME, AND USES THEREOF
; MOLECULE ENCODING SAME, AND USES TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                 5180819-6
                                 QΥ
                                                                                                                                                 Query Match
Best Local 9
                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
les 4; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۳
                                                                                                            Local Similarity hes 4; Conserv
1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; ; ilarity 100.0%; ; Conservative 0;
                                                                                                                        Conservative
                                                                                                                                             100.0%; 5
100.0%; 5
tive 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 23; DB 4; Length 7; pred. No. 2e+05;
                                                                                                                                             Score 23; DB pred. No. 18; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                        6
                                                                                                                                                                                                                                    Length 16;
                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

맑

```
Вb
                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: US-08-752-844-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 3
US-08-752-844-6
                                                                                                                                                                                                                                                                                       US-08-591-196-6
                                                                                                                                                                                                                                                                                                        RESULT 4
                                                                                                                                                                                                                            Sequence 6, Application Patent No. 5977316
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No. 5935821 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 6,
                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Schiff, J. Michael
REGISTRATION NUMBER: 40,253
REFERENCE/DOCKET NUMBER: 3041
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 813-5600
                                                                                                                                   APPLICANT: Chatterjee, Malaya
APPLICANT: Foon, Kenneth A.
APPLICANT: Chatterjee, Sunil K.
TITLE OF INVENTION: MONOCLONAL ANTIBODY 1A7 AND USE FOR THE
TITLE OF INVENTION: TREATMENT OF MELANOMA AND SMALL CELL CARCINOMA
                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON & FOERSTER
STREET: 755 PAGE MILL ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Chatterjee, Malaya
APPLICANT: Foon, Kenneth A.
APPLICANT: Chatterjee, Sunil K.
                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 19 amino acids
TYPE: amino acid
STRANDEDNESS: single
                               CITY: PALO ALTO
STATE: ÇA
                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (415 TELEX: 706141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                          2 NYDA 5
                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Application US/08752844 5935821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94304-1018
94304-1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PALO ALTO
                                                                                                                                                                                                                                                                   Application US/08591196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: MORRISON & FOERSTER 755 PAGE MILL ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (415) 494-0792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 23; ilarity 100.0%; Pred. No. Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MONOCLONAL ANTIBODY 1A7 AND USE TREATMENT OF MELANOMA AND SMALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/752,844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ه</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30414-20002.21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FOR THE CELL CARCINOMA
                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                              0;
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-982-597A-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 19, Application US/08982597A
Patent No. 5932693
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, VECURERY APPLICATION DATA:
APPLICATION NUMBER: US/08/591,196
FILING DATE: 16-JAN-1996
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: SChiff, J. Michael
                                                                                                   CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/032,542
FILLING DATE: 10-DEC-1996
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Meyer, Scott J.
REGISTRATION NUMBER: 25,275
REGISTRATION NUMBER: 25,275
 INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 65 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDLIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 5.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 19 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 40,253
REFERENCE/DOCKET NUMBER: 30
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 813-5600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                   REFERENCE/DOCKET NUMBER: WU
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Santoro, Samuel A. APPLICANT: Staatz, William D. TITLE OF INVENTION: Antithrom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS+DOS SOFTWARE: Patentin Release #1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Scott J. Meyer street: 800 No. 5932693th Lindbergh Blvd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (415) 494-0792
TELEX: 706141
                                                      TELEPHONE:
                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 NYDA 5
                                                                                                                                                                                                                                                                                                                                                                                  USA
: 63167
ER P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  h 100.0%;
Similarity 100.0%;
4; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                    MO
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Louis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                      314-694-3117
acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Antithrombotic Peptides
                                                                                                                                                                                                                                                                         US/08/982,597A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>ه</u>
                                                                                      WU-3002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30414-20002.20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

```
RESULT 7
US-08-384-367-2
                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ŷ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; MOLECULE TYPE: US-08-982-597A-19
                                                                                                                            밁
                                                                                                                                                                                                                                       US-09-136-218-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-136-218-19
Sequence 2, Application US/08384367
Patent No. 5639469
GENERAL INFORMATION:
APPLICANT: Deluca-Flaherty, Camille
APPLICANT: Chan, Victor J.
                                                                                                                                                                             Query Match 100.
Best Local Similarity 100.
Matches 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 19: SEQUENCE CHARACTERISTICS: LENGTH: 65 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 5.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/032,542
FILING DATE: 10-DEC-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Santoro, Samuel A. APPLICANT: Staatz, William D. TITLE OF INVENTION: Antithrom NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE: M
                                                                                                                            47
                                                                                                                                                                                                                                                                                                                                                           NAME: Meyer, Scott J.
REGISTRATION NUMBER: 25
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 800 No. CITY: St. Louis
                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           47 NYDA 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                    1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                         NYDA 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9, Application US/09136218
6083914
                                                                                                                                                                                                                                                                amino acid
GY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                800 No. 6083914th Lindbergh Blvd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                  314-694-3117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scott J. Meyer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide
                                                                                                                                                                                                                                                 peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Antithrombotic Peptides
                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/982,597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/09/136,218
                                                                                                                                                                                                                                                                                                                                                                        25,275
                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                              WU-3002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23;
Pred. No.
                                                                                                                                                                                             Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2;
                                                                                                                                                                                                         ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                               0;
                                                                                                                                                                                                       Length 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                               0
                                                                                                                                                                               Gaps
                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
Query Match
Best Local Similarity
""tches 4; Conserv
QΥ
                                                                                               ; ORGANISM: Homo sapiens US-09-029-345-1
                                                                                                                                                                                                                                                                                                                                       RESULT 8
US-09-029-345-1
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; MOLECULE TYPE: protein US-08-384-367-2
                                                                                                                             ; SEQ ID NO 1
; LENGTH: 104
; TYPE: PRT
                                              Query Match
Best Local :
                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Hirano, et al.
TITLE OF INVENTION: Monoclonal Antibody Recognizing Serum Amyloid
FILE REFERENCE: 112842-100
                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/09029345B Patent No. 6375949
                                   Matches
                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/029,345B
CURRENT FILING DATE: 1998-06-09
NUMBER OF SEO ID NOS: 1
SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 415/857-1125
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: MATCUS-WYNEE, LYND
REGISTRATION NUMBER: 34,869
REFERENCE/DOCKET NUMBER: 13
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
PAPLICATION NUMBER: US 08/208,571
FILING DATE: 10-MAR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Rel-
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Scarafia C., Liliana E.
APPLICANT: Brunke, Karen J.
TITLE OF INVENTION: NOVEL THIOL PROTEASE INHIBITOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                         35 NYDA 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 10
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE:
   1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Palo Alto
                                   4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             f: 100 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        975 California Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : 415/354-3588
415/857-1125
                                 100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; ilarity 100.0%; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sandoz Agro, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/384,367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                135-1088/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 23; DB 1;
Pred. No. 1.3e+02;
                               Score 23; DB 4;
Pred. No. 1.4e+02;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Version
                                                             Length 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

0

밁

41 NYDA 44

```
CURRENT APPLICATION NUMBER: US/09/134,001C
CURRENT FILING DATE: 1998-08-13
PRIOR APPLICATION NUMBER: US 60/064,964
PRIOR FILING DATE: 1997-11-08
PRIOR APPLICATION NUMBER: US 60/055,779
PRIOR FILING DATE: 1997-08-14
PRIOR FILING DATE: 1997-08-14
SEQ ID NO 4639
LENGTH: 149
TYPE: PRI
                                                                                                                        RESULT 11
US-08-752-844-4
                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                Ω
                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Staphylococcus epidermidis US-09-134-001C-4639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-134-001C-4639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; LENGTH: 122
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-154-750A-82
                                     Sequence 4, Application US/08752844
Patent No. 5935821
GENERAL INFORMATION:
APPLICANT: Chatterjee, Malaya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: KÍZZÍET, Kenneth
APPLICANT: POLYAK, Kornelia
TITLE OF INVENTION: p53-Induced Apoptosis
FILE REFERENCE: 1107, 75357
CURRENT APPLICATION NUMBER: US/09/154,750A
CURRENT FILING DATE: 1998-09-17
PRIOR APPLICATION NUMBER: 60/059,153
PRIOR APPLICATION NUMBER: 60/059,153
PRIOR APPLICATION NUMBER: 60/079817
PRIOR APPLICATION NUMBER: 60/079817
PRIOR APPLICATION NUMBER: 60/079817
PRIOR APPLICATION NUMBER: 60/079817
PRIOR FILING DATE: 1998-03-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-154-750A-82

; Sequence 82, Application US/09154750A

; Patent No. 6432640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PATENT NO. 6380370

GENERAL INFORMATION:

APPLICANT: Lynn Doucette-Stamm et al

TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCCUS

TITLE OF INVENTION: EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS

FILE REFERENCE: GTC-007
                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4639,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Vogelstein, Bert
APPLICANT: Kinzler, Kennet
APPLICANT: Polyak, Korneli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 93
SOFTWARE: FastSEQ for Windows Version
                         APPLICANT:
        APPLICANT:
                                                                                                                                                                                                          68 NYDA 71
                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59 NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NYDA 4
                                                                                                                                                                                                                                                                                     4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4;
Chatterjee, Malaya
Foon, Kenneth A.
Chatterjee, Sunil K.
                                                                                                                                                                                                                                                                                   100.0%; Score 23; ilarity 100.0%; pred. No. Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09134001C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 23; DB 4; Pred. No. 1.6e+02; % Asmatches 0;
                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                  2e+02;
                                                                                                                                                                                                                                                                                                                     DB 4; Length 149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 122;
                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-591-196-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; MOLECULE TYPE: protein US-08-752-844-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/08591196
Patent No. 5977316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                       APPLICANT: Chatterjee, putty.

APPLICANT: Foon, Kenneth A.

APPLICANT: Chatterjee, Sunil K.

TITLE OF INVENTION: MONOCLONAL ANTHODY IA7 AND USE FOR THE

TITLE OF INVENTION: TREATMENT OF MELANOMA AND SMALL CELL CARCINOMA

TREATMENT OF SECULENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 4: SEQUENCE CHARACTERISTICS:
                              COMPUTER READABLE FORM:
MEDIUM TYPE: FLODPY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION UNABER: US/08/591,196
FILING DATE: 16-JAN-1996
CLASSIFICATION: 424
ATTORNEY APPLICATION: 424
ATTORNEY/AGENT INFORMATION: NAME: Schiff, J. Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 30
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 813-5600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Schiff, J. Michael
REGISTRATION NUMBER: 40,253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/752,844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: MO
TITLE OF INVENTION: TR
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       119 NYDA 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 755 PAG
CITY: PALO ALTO
STATE: CA
                                                                                                                                                                                                                  COUNTRY: USA
ZIP: 94304-1018
                                                                                                                                                                                                                                                                                       ADDRESSEE: MORRISON & FOERSTER STREET: 755 PAGE MILL ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (415) 494-0792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: USA
ZIP: 94304-1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 755 PAGE CITY: PALO ALTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4;
                                                                                                                                                                                                                                                    CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   : 152 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; ilarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: MORRISON & FOERSTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MONOCLONAL ANTIBODY 1A7 AND USE FOR THE TREATMENT OF MELANOMA AND SMALL CELL CAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30414-20002.21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MELANOMA AND SMALL CELL CARCINOMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TYPE: PRT ; ORGANISM: Mus Musculus US-09-192-838B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; MOLECULE TYPE: protein US-08-591-196-4
                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
US-09-192-838B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                        US-09-491-916-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 4, Application US/09192838B
Patent No. 6355244
GENERAL INFORMATION:
APPLICANT: FOON, Kenneth A.
APPLICANT: CHATTERJEE, Malaya
APPLICANT: CHATTERJEE, Malaya
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR THE TREATMENT OF PSORIASIS
FILE REFERENCE: 304142000500
CURRENT APPLICATION NUMBER: US/09/192,838B
CURRENT FILING DATE: 1998-11-16
CURRENT FILING DATE: 1998-11-16
                                                                                                                                                                                                                                                                 Sequence 2, Application US/09491916
Patent No. 6326462
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 5
SOFTWARE: PATENTIN VER. 2.0
SEQ ID NO 4
LENGTH: 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (415) 494-0/92
TELEX: 706141
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/065,774 PRIOR FILING DATE: 1997-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 30.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 813-5600
TELEFAX: (415) 494-0792
                                                                                                                                                                                                                                                                                                                                                                                           119 NYDA 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                119 NYDA 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 152 amino acids
                                                      ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                              APPLICANT: Palmer, Leslie M.
TITLE OF INVENTION: NO. 6326462el ribH
NUMBER OF SEQUENCES: 5
                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4;
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
                                                                                                                                        ADDRESSEE: Dechert Price & Rhoads STREET: 4000 Bell Atlantic Tower, CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amino acid
                                                                                                                              STATE: PA
                                                                                                           COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 23; DB 4; 100.0%; Pred. No. 2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30414-20002.20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23; DB 2;
Pred. No. 2e+02;
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 4; Length 152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                              1717 Arch Stre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
밁
                                                                                                                                                                                                                                             ; TYPE: PRT
; ORGANISM: PEAR
US-09-129-030-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
US-09-129-030-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; SEQUENCE DESCRIPTION: SEQ ID NO: US-09-491-916-2
                                   US-09-134-001C-4747
                                                     RESULT 16
Sequence 4747, Application US/09134001C Patent No. 6380370
                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 22, Application US/09129030A Patent No. 6242221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                          Matches
                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/129,030A CURRENT FILING DATE: 1998-08-04
EARLIER APPLICATION NUMBER: AU PN7856
EARLIER FILING DATE: 1996-02-05
                                                                                                                                                                                                                                                                                                                                              EARLIER APPLICATION NUMBER: AU PO2361
EARLIER FILING DATE: 1996-09-16
EARLIER PPLICATION NUMBER: PCT/AU97/
EARLIER FILING DATE: 1997-01-24
NUMBER OF SEQ ID NOS: 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION TITLE OF INVENTION: GENOMIC PPO CLONES FILE REFERENCE: 57072-PCT-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                               LENGTH: 175
                                                                                                        10 NYDA 13
                                                                                                                        1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    70 NYDA 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 215-994-2222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 08/977,553 FILING DATE: <Unknown> ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: <Unknown> PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
                                                                                                                                                                        4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 154 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/09/491,916 FILING DATE: 27-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER: 28,354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Dickinson, Todd Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                         100.0%; Score 23; DB 4; 100.0%; Pred. No. 2.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                  PCT/AU97/00041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 23; DB 4;
Pred. No. 2.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2:
                                                                                                                                                                                                       Length 175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 154;
                                                                                                                                                                        Indels
                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

GENERAL INFORMATION: APPLICANT: Lynn Dou

OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCC

Section 1

```
RESULT 18
US-08-858-207A-339
                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: PRT
; ORGANISM: Staphylococcus epidermidis
US-09-134-001C-4623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-134-001C-4623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Staphylococcus epidermidis US-09-134-001C-4747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/134,001C CURRENT FILING DATE: 1998-08-13 PRIOR APPLICATION NUMBER: US 60/064,964 PRIOR FILING DATE: 1997-11-08 PRIOR APPLICATION NUMBER: US 60/055,779 PRIOR FILING DATE: 1997-08-14 NUMBER OF SEQ ID NOS: 5674 SEQ ID NO 4623
                                                                                                                                                                                                                                                          Sequence 339, Application US/08858207A Patent No. 6348328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4623, Application US/09134001C
Patent No. 6380370
GENERAL INFORMATION:
APPLICANT: Lynn Doucette-Stamm et al
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING
TITLE OF INVENTION: EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: GTC-007
                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                   GENERAL INFORMATION: APPLICANT: Black,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 4747
LENGTH: 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: US 60/064,964
PRIOR FILLING DATE: 1997-11-08
PRIOR APPLICATION NUMBER: US 60/055,779
PRIOR FILLING DATE: 1997-08-14
NUMBER OF SEQ ID NOS: 5674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS FILE REFERENCE: GTC-007
CURRENT APPLICATION NUMBER: US/09/134,001C
CURRENT FILING DATE: 1998-08-13
                                                                                                APPLICANT: Hodgson, John
APPLICANT: Knowles, David
APPLICANT: Nicholas, Richard
APPLICANT: Stodola, Robert
TITLE OF INVENTION: No. 6348328el Compounds
NUMBER OF SEQUENCES: 552
                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 178
                                                                                                                                                                                                                                                                                                                                                                      147 NYDA 150
                         ADDRESSEE: SmithKline Beecham Corporation STREET: 709 Swedeland Road CITY: King of Prussia
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67 NYDA 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                4.
                   PΑ
USA
                                                                                                                                                                                                                       Black, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 23; DB 4;
Pred. No. 2.4e+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 23; DB 4;
Pred. No. 2.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 175;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TO STAPHYLOCOCCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
```

```
FRESULT 20
5180819-2
; Patent No. 5180819
; APPLICANT: CAYRE, YVON
TITLE OF INVENTION: PURIFIED MYELOBLASTIN,
MOLECULE ENCODING SAME, AND USES THEREOF
NUMBER OF SEQUENCES: 9
; CURRENT APPLICATION DATA
; CORRENT APPLICATION DATA
                                                                                                                                                                                                             Вþ
                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 19
5180819-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   γ
SEQ ID NO:2:
                                                                                                                                                                                                                                                                                                                                            5180819-3
                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: CAYRE, YVON
TITLE OF INVENTION: PURIFIED MYELOBLASTIN, NUCLEIC
MOLECULE ENCODING SAME, AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TOPOLOGY: 11; MOLECULE TYPE: US-08-858-207A-339
                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO:3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No. 5180819
                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/017670
FILING DATE: 14-MAY-1996
ATTORNEY/AGENT INFORMATION:
NAME: Gimmi, Edward R
REGISTRATION NUMBER: 38,891
REFERENCE/DOCKET NUMBER: P50475
                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 9
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/455,61
FILING DATE: 22-DEC-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NEORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 19400-0000
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION: TELEPHONE: 610-270-4478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/858,207A FILING DATE: 09-MAY-1997 CLASSIFICATION: 435
PRIOR APPLICATION ADTA:
APPLICATION NATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   117 NYDA 120
           APPLICATION NUMBER: US/07/455,614 FILING DATE: 22-DEC-1989
                                                                                                                                                                                                             68 NYDA 71
                                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                      LENGTH: 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity tes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 610-270-5090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM CON
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      191 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No. 6348328e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           single
                                                                                                                                                                                                                                                                   100.0%; Score 23; DB 6; 1
100.0%; Pred. No. 2.9e+02;
Live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          339:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P50475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 23; DB 4;
Pred. No. 2.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                         NUCLEIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                    Length 214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 191;
                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACID
                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
US-08-944 ...
US-08-944 ...
; Sequence 30, Appl.
; Patent No. 6232456
; PATENT INFORMATION:
APPLICANT: COHEN, MAURICE
APPLICANT: COLPITTS, TRACEY L.
                                                                                                         RESULT 22
US-08-944-483-30
                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; LENGTH: 215
5180819-2
                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 21
US-08-394-600B-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                US-08-394-600B-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 20, Approximately 20, 5843693
                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 229 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                           TOPOLOGY: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: Donald J. Pochopien
REGISTRATION NUMBER: 32,167
REFERENCE/DOCKET NUMBER: 820.005/11850US05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: Compositions for the Inhibition of Invention: Protein Hormone Formation and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: UPFILING DATE: 02/27/95
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                 82 NYDA 85
                                                                                                                                                                                                                                                                                                                          TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68 NYDA 71
                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                            1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                        4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chicago
                                                                                                                                                                                                                                                                                                                       amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08394600B
                                                                                          Application US/08944483
                                                                                                                                                                                                                                                                                                                                    229 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: McAndrews, Held & Malloy, Ltd.
                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                             312/707-8889
312/707-9155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jewell,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Perez, Carl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kriegler, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Koths, Kirston E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Halenbeck, Robert F
                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 David A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/394,600B
                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                    Score 23; DB 2;
Pred. No. 3.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23; DB 6;
Pred. No. 2.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                 Length 229;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 215;
                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TOPOLOGY: linear ; MOLECULE TYPE: No. 6232456e US-08-944-483-30
                                                                                                                                                                                                                                                                           PCT-US95-02513-20
                                                                                                                                                                                                                                                                                             RESULT 23
                                                                                                                                                                                                                                       Sequence 20, Application PC/TUS9502513 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 4; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 229 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Becker, Cheryl L.
REGIZION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 61
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                   NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                  TITLE OF INVENTION: Compositions for the Inhibition TITLE OF INVENTION: Protein Hormone Formation and US NUMBER OF SEQUENCES: 22
                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Abbott La
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: OF THE PROSTATE NUMBER OF SEQUENCES: 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                ADDRESSEE: Marshall, O'Toole, ADDRESSEE: Borun
                                                                                                                                                                                                                                                                                                                                             82 NYDA 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Abbott Park STATE: IL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 847/938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60064-3500
Chicago
: Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   229 amino acids
                                 6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 Abbott Park Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STROUPE, STEVEN D.

VENTION: NOVEL SERINE PROTEASE REAGENTS

VENTION: AND METHODS USEFUL FOR DETECTING AND TREATING DISEASES
                                                                                                                                                       Perez, Carl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RUSSELL, JOHN C. STEWART, KENT D.
                                                                                                                                                                    Kriegler, Michael
                                                                                                                                                                                     Jewell, David A. Koths, Kirston E.
                                                                                                                                                                                                                         Halenbeck, Robert F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KLASS, MICHAEL R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Laboratories
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDWARD N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/944,483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30:
                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6183.US.01
                                                                                                                                                                                                                                                                                                                                                                                                           Score 23; DB 4; red. No. 3.1e+02;
                                                                 Gerstein, Murray &
                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 229;
                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                     Thereof
                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
RESULT 24
US-09-230-196-18
; Sequence 18, Apr
; Patent No. 6307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCT-US95-02513-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 100 Matches 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Rausch
APPLICANT: Jensen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/038,109
EILING DATE: 19-FEB-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/230,196
                                                                                                                                                                           CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Rauscher III, Frank J.
APPLICANT: Jensen, David E.
TITLE OF INVENTION: BRCA1 Associated Protein (BAP-1) and
TITLE OF INVENTION: Uses Therefor
NUMBER OF SEQUENCES: 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acids
TOPOLOGY: lina
(OLECHIA
ELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: 312/474-6300
TELEPHONE: 312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Williams Jr., Joseph A.
REGISTRATION NUMBER: 38,659
REFERENCE/DOCKET NUMBER: 2752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
               REFERENCE/DOCKET NUMBER:
                              NAME: Bak, Mary E. REGISTRATION NUMBER: 31,215
                                                                                                                                         APPLICATION NUMBER: US 6 FILING DATE: 02-AUG-1996
                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: UZIP: 19477
                                                                                                                                                                                                                                                                                                                                                                                                          STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                           CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82 NYDA 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                       T: Spring House Corporate Cntr., PO Box 457 Spring House
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8, Application US/09230196
6307035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60606-6402
                                                                                                                                                                                                                                                                                                                                                                                                      Pennsylvania
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Howson and Howson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 23; DB 5; 100.0%; Pred. No. 3.1e+02;
                                                                                                                                                              us 60/022,997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCT/US95/02513
               WST68BUSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27527/32404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
```

```
Query Match
Best Local Similarity
watches 4; Conserv
                                                                         ; TOPOLOGY: unknown ; MOLECULE TYPE: protein US-09-230-196-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 25
US-09-230-196-23
; Sequence 23, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         / MOLECULE TYPE: protein US-09-230-196-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent No. 6307035
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                             TELEFAX: 215-540-5818
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 215-540-5818
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                             NAME: Bak, Mary E.
REGISTRATION NUMBER: 31,215
REFERENCE/DOCKET NUMBER: WS
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/022,997
FILING DATE: 02-AUG-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of COMPUTER: IBM PC comp
                                                                                                                                                                      SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                           FILING DATE: 19-FEB-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Rauscher III, Fr
APPLICANT: Jensen, David E.
TITLE OF INVENTION: BRCA1 A
TITLE OF INVENTION: Uses Th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   140 NYDA 143
                                                                                                                      TYPE: amino STRANDEDNESS:
                                                                                                                                                                                   TELEPHONE: Z15 TELEPHONE: Z15-540-5818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: Spring House
CITY: Spring House
                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/09/230,196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM:
SOFTWARE: PatentI
                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid STRANDEDNESS: TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19477
                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3, Application US/09230196 6307035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pennsylvania
U.S.A.
                                                                                                                                                     230 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Spring House Corporate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 230 amino acids
                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 23; DB 4; larity 100.0%; Pred No. 3.2e+02; Conservative 0; Migmatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                 215-540-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Howson and Howson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             215-540-9200
                                                                                                                                                                                                                                                                                                             JMBER: US 60/038,109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Floppy disk
            100.0%; Score 23; DE 100.0%; Pred. No. 3.2 cive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Uses Therefor
                                                                                                                                                                                                                                                           31, 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Frank J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Associated Protein (BAP-1) and
                                                                                                                                                                                                                                              WST68BUSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cntr.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Version #1.30
                           3.2e+02;
                                            DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PO Box
                                        Length 230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 230;
            Indels
              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

NI

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-378-761A-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-378-761A-80
                                                                                                                                                                                                                                                      US-08-485-286-80
                                                                  GENERAL INFORMATION:
APPLICANT: WALSH, TERENCE A
APPLICANT: HEY, TIMOTHY D
APPLICANT: MORGAN, ALICE ER
APPLICANT: MORGAN, ALICE ER
TITLE OF INVENTION: PRECURSOR
TITLE OF INVENTION: USING
                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 80, Patent No. 5
                                                                                                                                                                                                 Patent No. 5646026
Patent No. 5646026 5646119
                                                                                                                                                                                                                                       Sequence 80,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: WALSH, TERENCE A APPLICANT: HEY, TIMOTHY D APPLICANT: MORGAN, ALICE ER TITLE OF INVENTION: RIBOSOMETITLE OF INVENTION: PRECURSOR TITLE OF INVENTION: USING NUMBER OF SEQUENCES: 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: BORUCKI, ANDREA T
REGISTRATION UMBER: 33651
REFERENCE/DOCKET NUMBER: 38:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENCTH: 250 amino acids
TYPE: amino acid
STRANDEDMESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/378,761A
FILING DATE: 26-JAN-1995
CLASSIFICATION: 435
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE:
                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        140 NYDA 143
                                                                                                                                                                                                                                                                                                                              55 NYDA 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
               ADDRESSEE
                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INDIANAPOLIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/08378761A
                                                                                                                                                                                                                                 Application US/08485286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: ANDREA T. BORUCKI
9330 ZIONSVILLE ROAD
9330 ZIONSVILLE ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SD
                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (317) 337-4846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
                                                                    RIBOSOME-INACTIVATING PROTEINS, INACTIVE PRECURSOR FORMS THEREOF, A PROCESS FOR MAKING A METHOD OF USING
                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RIBOSOME-INACTIVATING PROTEINS, INACTIVE PRECURSOR FORMS THEREOF, A PROCESS FOR MAKING A METHOD
                 BORUCKI
                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                 Score 23; DB 1;
Pred. No. 3.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                Length 250;
                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ċ,
```

```
Query Match
Best Local Similarity
----hes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 28
US-08-230-428B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-485-286-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 4, Application US/08230428B Patent No. 5998378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION: APPLICANT: Kriegh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (317) 337-484
INFORMATION FOR SEQ ID NO: 8
SEQUENCE CHARACTERISTICS:
LENGTH: 250 amino acids
                                                                                     CLASSIFICATION: 514
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: 07/905,546
                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 33651
REFERENCE/DOCKET NUMBER: 38
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/378761
FILING DATE: 26-JAN-1995
ATTORNBY/AGENT INFORMATION:
NAME: DOUGHT ANDERS "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                             APPLICATION NUMBER: 07/91 FILING DATE: 25-JUN-1992 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: Compositions For 1 TITLE OF INVENTION: Hormone Formation NUMBER OF SEQUENCES: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 4560 Horto
CITY: Emeryville
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55 NYDA 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                        APPLICATION NUMBER: US/0 FILING DATE: 19-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: United States of America ZIP: 94662-8097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BORUCKI, ANDREA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: CHIRON CORPORATION Intellectual Property - R440 4560 Horton Street, P.O. Box 8097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jewell, David A.

Koths, Kirston E.

ROTHS The Inhibition Of The I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Halenbeck,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Perez, Carl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kriegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          337-4846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Michael
                                                                                                                                                                                                                                             US/08/230,428B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/485,286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Robert F.
07/395,253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           38272B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23; DB 1;
Pred. No. 3.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 250;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (As Amended)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

```
Ş
               Query Match
Best Local Similarity
Thes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                               ; MOLECULE TYPE: protein US-08-752-844-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 29
US-08-752-844-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-230-428B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No. 5935821
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 66,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (510) 655-3542
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                              CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: SCHIff, J. Michael
REGISTRATION NUMBER: 40,253
REFERENCE/POCKET NUMBER: 30414-20002.21
TELEPOMMUNICATION INFORMATION:
TELEPIANE: (415) 813-5600
TELEPAX: (415) 494-0792
                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/752,844
                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 66
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON & FOERSTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Foon, Kenneth A.
APPLICANT: Chatterjee, Sunil K.
TITLE OF INVENTION: MONOCLONAL J.
TITLE OF INVENTION: TREATMENT OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 36,914
REFERENCE/DOCKET NUMBER: 0820.004
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Chatterjee, Malaya
                                                                                                                                                                                                       TELLETAX: (*1... 706141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 16-AUG-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109 NYDA 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Y MAICH 100.0%;
Local Similarity 100.0%;
nes 4; Conservative 0;
                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: PALO ALTO
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: MOKKLOUN COMPRET: 755 PAGE MILL ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RY: USA
94304-1018
                                                                                                                                                1: 263 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6, Application US/08752844
5935821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Savereide, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               256 amino acids
                             100.0%; Score 23; DB 2; 1 larity 100.0%; Pred. No. 3.7e+02; Conservative 0; Mismatches 0;
                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (510)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601-2718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MONOCLONAL ANTIBODY 1A7 AND USE FOR THE TREATMENT OF MELANOMA AND SMALL CELL CARCINOMA
                                                                                                                                                                                                                                                                                                                                                                                       US/08/752,844
                                                                                                                                                                                                    66:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 23; DB 2;
Pred. No. 3.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                      Version #1.30
                                                              Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                               Indels
                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-296-284-27
; Sequence 27, Appli
; Patent No. 6204040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Gluconobacter suboxydans US-09-296-284-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              : NUMBER OF SEQ ID NOS:
SOFTWARE: PatentIn Ver
SEQ ID NO 27
: LENGTH: 280
: TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-555-568B-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Choi, Eui-Sung
APPLICANT: Rhee, Sang-Ki
APPLICANT: Lee, Eun-Hae
APPLICANT: Lee, Eun-Hae
TITLE OF INVENTION: Gluconobacter Suboxydans Sorbitol Dehydrogenase, Genes
TITLE OF INVENTION: and Methods of Use Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 19, Application US/08555568B Patent No. 5976854 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILE REFERENCE: 1533.0870000
CURRENT APPLICATION NUMBER: U
CURRENT FILING DATE: 1999-04
                                                                                                         ATTORNEY/AGENT INFORMATION:

NAME: Brown, Scott A.

REGISTRATION NUMBER: 32,724

TELECOMMUNICATION INFORMATION:

TELEPHONE: (617) 498-8224

TELEPAX: (617) 876-5851
                                                                                           TELEFAX: (617) 876-58: INFORMATION FOR SEQ ID NO:
TOPOLOGY: 1: MOLECULE TYPE:
                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/555,568B
                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Jones, Simon
APPLICANT: Tang, Jim
TITLE OF INVENTION: Calcium Independent Phospholipase A2/B
NUMBER OF SEQUENCES: 25
                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           107 NYDA 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            119 NYDA 122
                                 TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 87 Cambi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity tes 4; Conserv
                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: UZIP: 02140
                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/09296284A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Genetics Institute,
87 CambridgePark Drive
                                                    292 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 23; ilarity 100.0%; Pred! No. Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                   U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1999-04-22
                                                                                           19:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/09/296, 284A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3.9e+02;
thes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
RESULT 32
US-09-519-223-19
                                                                                                                                                                           RESULT 33
US-08-368-852-13
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 19, Application Patent No. 6274140 GENERAL INFORMATION:
                                                                                                                            Sequence 13, Applicat Patent No. 5691183 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 19:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617), 498-8224
                                                         APPLICANT: Franzusoff, Alex
APPLICANT: Miranda, Luis R.
TITLE OF INVENTION: CD4+ T-LYMPHOCYTE PROTEASES AND GENES
TITLE OF INVENTION: ENCODING SAID PROTEASES
                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 292 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: Calcium Independent Phospholipase A2/B NUMBER OF SEQUENCES: 25
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: protein -519-223-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Jones
APPLICANT: Tang,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
PRIOR APPLICATION DATA:
                              CORRESPONDENCE ADDRESS
                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                              151 NYDA 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            151 NYDA 154
                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 292 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Massachusetts
                                                                                                                                                             Application US/08368852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09519223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87 CambridgePark Drive
1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jones, Jim
                                                                                                                                                                                                                                                                                                        100.0%; Score 23; DB 4; ilarity 100.0%; Pred. No. 4.le+02; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genetics Institute, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Simon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/09/519,223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/555,568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 23; DB 2; Le
Pred. No. 4.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #1.25 (EPO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 292;
                                                                                                                                                                                                                                                                                                                                       Length 292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
"hes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; MOLECULE TYPE: protein US-08-368-852-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-525-940-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 13, Application US/08525940 Patent No. 5866351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION UMBER: US 08/
FILING DATE: 01-JAN-1995
PRIOR APPLICATION DATA:
APPLICATION UMBER: US 08/
APPLICATION OD-101-1993
ATTORNEY/AGENT INFORMATION:
NAME: CCCC-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/525,940
                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Franzusoff, Alex
APPLICANT: Miranda, Luis R.
APPLICANT: Wolf, Joseph R.
TITLE OF INVENTION: CD4+ T-LYMPHOCYTE PROTEASES AND GENES
TITLE OF INVENTION: ENCODING SAID PROTEASES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 306 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              49 NYDA 52
                                                                                                                                                                                                                                                                                  COUNTRY: U
ZIP: 80203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 303/863-97
TELEFAX: 303/863-0223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: UZIP: 80203
                                                                                                                                                                                                                                                                                                                      STATE:
                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                  SSEE: Sheridan Ross & McIntosh
T: 1700 Lincoln Street, Suite 3500
Denyer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amino acid
                                                                                                                                                                                                                                                                                                                    Colorado
                                                                                                                                                                                                                                                                                                  U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 23; ilarity 100.0%; Pred. No. Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        303/863-9700
                                        US 08/088,322
                                                                                            US 08/368,852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 4.3e+02;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1; Length 306;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
```

```
RESULT 36
US-09-296-284-6
· Sequence 6, Application US/09296284A
                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 35
US-08-976-838-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-525-940-13
                                                                                                                                                                                                             US-08-976-838-13
                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 13, Application US/08976838 Patent No. 5981259 GENERAL INFORMATION:
                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                    FILING DATE:
CLASSIFICATION: 435
ATTORNEY_AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 33,020
REFERENCE/DOCKET NUMBER: 2848
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (303) 863-02: INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Franzusoff
TITLE OF INVENTION: OF
TITLE OF INVENTION: N
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPOTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, V
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/976,838
                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 306 amino acids
                                                                                                                                                                                                                       TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 306 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 28
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                 49 NYDA 52
                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49 NYDA 52
                                                                                                                                                                                                                                                                                                                        TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NYDA 4
                                                                                                                                                       4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4;
                                                                                                                                                                                                                                                  amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Denver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Sheridan Ross P.C
1700 Lincoln St., Su:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Franzusoff, Alex
WENTION: CD4+ T-LYMPHOCYTE PROTEASE NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; illarity 100.0%; Conservative (
                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                          (303) 863-0223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 U.S.A.
                                                                                                                                                                                                                                                                                                                          (303)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 863-0223
NO: 13:
                                                                                                                                                                                                                                                                                                                       863-9700
                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULES
                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                    2848-11-C2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2848-11-C1
                                                                                                                                                    Score 23; DB Pred. No. 4.3 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 23; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Version
                                                                                                                                                       4.3e+02;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.3e+02;
                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2;
                                                                                                                                                                                Length 306;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 306;
                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                     0;
                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
```

```
CURRENT APPLICATION NUMBER: US/09/296,
CURRENT FILING DATE: 1999-04-22
NUMBER OF SEQ ID NOS: 87
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 6
LENGTH: 306
TYPE: PRT
ORGANISM: Gluconobacter suboxydans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Whiches 4; Conserve
                                                                                             RESULT 38
US-09-000-064-2
                                                                                                                                                                      밁
                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                ; LENGTH: 355
TYPE: PRT
; ORGANISM: Commamonas acidovorans
US-09-000-040-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 37
US-09-000-040-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-296-284-6
Sequence 2, Application US/09000064
Patent No. 6214592
GENERAL INFORMATION:
APPLICANT: Crouzet, Joel
APPLICANT: Favre-Bulle, Olivier
                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 3 LENGTH: 355
                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 3, Application US/09000040B Patent No. 6180388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No. 6204040 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: CROUZET, Joel
APPLICANT: FAVRE-BULLE, Dildier
APPLICANT: FAVRE-BULLE, Dilvier
APPLICANT: JOURDAT, Catherine
APPLICANT: PIERRARD, Jerome
APPLICANT: PIERRARD, Jerome
APPLICANT: THIBAUT, Denis
APPLICANT: GUITTON, Carole
TITLE OF INVENTION: ENZYMES AND MICRO-ORGANISMS WITH AMIDASE ACTIVITY WHICH
FILE REFERENCE: 003025-035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/000,040B
CURRENT FILING DATE: 1998-04-03
EARLIER APPLICATION NUMBER: FR 95/08917
EARLIER FILING DATE: 1995-07-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: Gluconobacter Suboxydans Sorbitol Dehydrogenase, Genes TITLE OF INVENTION: and Methods of {}^1\text{Use} Thereof FILE REFERENCE: 1533.0870000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Choi, Eui-Sung
APPLICANT: Rhee, Sang-Ki
APPLICANT: Lee, Eun-Hae
                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                              EARLIER APPLICATION NUMBER: PCT/FR96/01118
EARLIER FILING DATE: 1996-07-17
                                                                                                                                                                      235 NYDA 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133 NYDA 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NYDA 4
                                                                                                                                                                                                        1 NYDA 4
                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/09/296, 284A
                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                            Score 23; DB 4;
Pred. | No. 5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.3e+02;
                                                                                                                                                                                                                                                                                   DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 4;
                                                                                                                                                                                                                                                                               Length 355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 306;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

0

```
PRIOR APPLICATION NUMBER: 09/436,063
PRIOR FILING DATE: 1999-11-08
PRIOR APPLICATION NUMBER: 60/107,727
PRIOR FILING DATE: 1998-11-09
NUMBER OF SEQ ID NOS: 50
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 20
LENGTH: 383
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; SEQ ID NO 2
; LENCTH: 355
; TYPE: PRT
; ORGANISM: Escherichia coli
US-09-000-064-2
                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Description of Artificial Sequence:/note; OTHER INFORMATION: synthetic construct US-09-627-650B-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 39
US-09-627-650B-20
                                                                                                                                      RESULT 40
US-09-134-001C-4848
                                                                                                                                                                                                                                   밁
Sequence 4848, Application US/09134001C
Patent No. 6380370
GENERAL INFORMATION:
APPLICANT: Lynn Doucette-Stamm et al
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCCUS
TITLE OF INVENTION: EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 20, Application US/09627650B Patent No. 6406872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: ENZYMES AND MICROORGANISMS HAVING AMIDASE ACTIVITY FOR TITLE OF INVENTION: HYDROLYSING POLYAMIDES

FILE REFERENCE: 003025-036

CURRENT APPLICATION NUMBER: US/09/000,064

CURRENT FILING DATE: 1998-04-03

EARLIER APPLICATION NUMBER: PCT/FR96/01119

EARLIER FILING DATE: 1996-07-17

EARLIER APPLICATION NUMBER: PCT/FR96/01119

EARLIER APPLICATION NUMBER: FR 9508916

EARLIER APPLICATION NUMBER: FR 9508916

EARLIER FILING DATE: 1995-07-18

NUMBER OF SEQ ID NOS: 2

SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Jorgensen, Erik
TITLE OF INVENTION: Nematode Neuromuscular
TITLE OF INVENTION: Methods Related Theret
FILE REFERENCE: 21101.0009U3
CURRENT APPLICATION NUMBER: US/09/627,650B
CURRENT FILING DATE: 2000-07-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Jourdat, Catherine APPLICANT: Le Coq, Anne-Marie APPLICANT: Petre, Dominique
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \PPLICANT: Bamber, Bruce
\PPLICANT: Jorgensen, E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               235 NYDA 238
                                                                                                                                                                                                                               267 NYDA 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 100.
les 4; Conservative
                                                                                                                                                                                                                                                                                                                     Local Similarity les 4; Conserv
                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Neuromuscular Junction GABA Receptors Related Thereto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 23; DB 4;
Pred. No. 5e+02;
Mismatches
                                                                                                                                                                                                                                                                                                                                       Score 23; I
Pred. No. 5
                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                 DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4; Length 355;
                                                                                                                                                                                                                                                                                                                     .5e+02;
s 0;
                                                                                                                                                                                                                                                                                                                                                               Length 383;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
RESULT 41
US-09-074-512-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Staphylococcus epidermidis US-09-134-001C-4848
US-09-074-512-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Applica Patent No. 5952479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 60/055,779
PRIOR FILING DATE: 1997-08-14
NUMBER OF SEQ ID NOS: 5674
SEQ ID NO 4848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: GTC-007
CURRENT APPLICATION NUMBER: US/09/134,001C
CURRENT FILING DATE: 1998-08-13
PRIOR APPLICATION NUMBER: US 60/064,964
PRIOR FILING DATE: 1997-11-08
                                                                                                         INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 429 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 404
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Hillman, Je APPLICANT: Corley, Net APPLICANT: Patterson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-855-0555
TELEFAX: 650-845-4166
                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS
                                               IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              176 NYDA 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 3174 POI
CITY: Palo Alto
STATE: CA
                                                                                                                                                                                                                                            NAME: Cerrone, Michael REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM CON OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
               LIBRARY: OVARTUT01
CLONE: 2257452
                                                              TOPOLOGY:
                                                                              STRANDEDNESS:
                                                                                             TYPE: amino acid
                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                FILING DATE
                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/09074512
                                                                                                           429 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: Incyte Pharmaceuticals, Inc 3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hillman, Jennifer L. Corley, Neil C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM Compatible
                                                                          single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n, Chandra
HUMAN ARSENITE-RESISTANCE
                                                                                                                                                                                                                                                                                                                                                                               US/09/074,512
                                                                                                                                                                                                                                            39,132
                                                                                                                                                                                                                               PF-0518 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

Query Match

100.0%;

Score 23;

DB

2;

Length 429;

```
RESULT 43
US-09-012-873-2
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 42
US-08-844-010-2
                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                           Sequence 2, Application US/09012873 Patent No. 6074858
                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2, Application US/08844010
Patent No. 5753480
GENERAL INFORMATION:
APPLICANT: Lawlor, Elizabeth
TITLE OF INVENTION: No. 5753480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 4; Conserv
                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 18-APR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Gimmi, Edward R
REGISTRATION NUMBER: 38,891
REFERENCE/DOCKET NUMBER: 9314
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-4478
CORRESPONDENCE ADDRESS:
ADDRESSEE: Smithkline Beecham Corporation
STREET: 709 Swedeland Road
CITY: King of Prussia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NFORMATION FOR SEQ ID NO:
                                                                   APPLICANT: Lawlor, Elizabeth TITLE OF INVENTION: No. 6074
                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 447 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 9607991.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 19406-0939
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: FastSEQ for Windows Version CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESSE: SmithKline Beecham Corporation
STREET: 709 Swedeland Road
                                                                                                                                                                                                                                                  373 NYDA 376
                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          388 NYDA 391
                                                                                                                                                                                                                                                                                                                Local Similarity les 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 610-270-5090
                                                                                                                                                                                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 18-AP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM CONTROL OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 709 Swedeland CITY: King of Prussia STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                              amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                            447 amino acids
                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         тинеR: US/08/844,010
18-APR-1997
N: 495
                                                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                         100.0%; Score 23; DB 1; 1
100.0%; Pred. No. 6.4e+02;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No. 5753480el Compounds: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Pred. No. 6.2e+02; tive 0; Mismatches 0;
                                                                                      6074858el Compounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P31458-2
                                                                                                                                                                                                                                                                                                                                       DB 1; Length 447;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

```
DЬ
                                Qy
                                                                                                                                     ; ORGANISM: Staphylococcus epidermidis US-09-134-001C-3354
                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 44
US-09-134-001C-3354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; MOLECULE TYPE: protein US-09-012-873-2
                                                                                                                                                                                    NUMBER OF SEQ ID NOS:
SEQ ID NO 3354
LENGTH: 456
                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:

APPLICANT: LYDIN DOUGETTE-Stamm et al
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCC
TITLE OF INVENTION: EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: GTC-007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.
                                                                      Matches
                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 3354, Application US/09134001C
Patent No. 6380370
                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US 60/055,779
PRIOR FILING DATE: 1997-08-14
NUMBER OF SEQ ID NOS: 5674
                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/134,001C CURRENT FILING DATE: 1998-08-13
                                                                                                                                                                        LENGTH: 45
TYPE: PRT
                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 60/064,964 PRIOR FILING DATE: 1997-11-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 18-APR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Gimmi, Edward R
REGISTRATION NUMBER: 38,891
REFERENCE/DOCKET NUMBER: P314
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-4478
TELEPHONE: 610-270-5090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/844,010
FILING DATE: 18-APR-1997
APPLICATION NUMBER: 9607991.8
FILING DATE: 18-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     373 NYDA 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
81 NYDA 84
                                                                  Local Similarity es 4; Conserv
                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
TOPOLOGY: lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM CON OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19406-0939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        447 amino acids
                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SYSTEM: DOS
FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         single
                                                             100.0%; Score 23; DB 4;
100.0%; Pred. No. 6.6e+02;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 23; DB 3; 1
100.0%; Pred. No. 6.4e+02;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08/844,010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/09/012,873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P31458-2
                                                                                               Length 456;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 447;
                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
```

```
RESULT 45
US-08-459-100A-4
Sequence 4, Application US/08459100A
Patent No. 5554172
IGREAL INFORMATION:
APPLICANT: LL, ET AL.
APPLICANT: LL, ET AL.
APPLICANT: LL, ET AL.
APPLICANT: LL, ET AL.
ITTLE OF INVENTION: GABAA Receptor Epsilon Subunit
NUMBER OF SEQUENCES: 4
ADDRESSEE: CECCHT, STEWART & OLSTEIN
STREET: ADDRESSEE: CECCHT, STEWART & OLSTEIN
SCHOULE STEWART & OLSTEIN & STEWART & OLSTEIN
STEWARD & STEWART & OLSTEIN
SEQUENCE CHARACTERISTICS:
LENGTH: ADDRESSE: TOPOLOGY: LINEAR
NOLECULE TYPE: PROTEIN
US-08-49-100A-4

THE SEQUENCE CHARACTERISTICS:
LENGTH: ADDRESSEE: CECCHT, STEWART & OLSTEIN
US-08-49-100A-4

OUETY MATCH & SCOOLES STEAT & OLSTEIN
US-08-49-100A-4

OUETY MATCH & SCOOLE ADDRESSEE

SEQUENCE CHARACTERISTICS:
HEROMATION ROBERSEE

LENGTH: ADDRESSEE: CECCHT, STEWART & OLSTEIN
US-08-49-100A-4

OUETY MATCH & OLSTEIN
US-08-49-100A-4

OLSTEIN & OLSTEIN & OLSTEIN
US-08-49-10A-4

OLSTEIN & OLSTEIN & OLSTEIN
US-08-49-10A-4

OLSTEIN & OLSTEIN &
```

				A MANAGE OF	ā	-
	2			*Add		, a
	and the second second second	Marie Marie	e e sample e man en	gen a W ang di nasa sa m		- 4
					•	
	german in the end of the	en e	THE THE PARTY OF T		A BURNEY	part -
∫ 			g = 1 = 00		* .	
		•	•			
x						
	e Tu				. *	
i to			was the		y see	t-
			. (% •			
· ·						
Ž.						
<i>t</i>						9
4	* 4					
· ·						6
ori Ori						
						100
			4.			
						in the
\$ =	; ##.			, San Taran	·	
,			. 4		V.	
		÷				¥.

```
Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run on:
Published_Applications_AA:*

1: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*

2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*

3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*

5: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*

6: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*

7: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

9: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

9: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

10: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

11: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

12: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

13: /cgn2_6/ptodata/2/pubpaa/US00_NEW_PUB.pep:*

14: /cgn2_6/ptodata/2/pubpaa/US00_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT943-5
23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      February 6, 2003, 11:22:09; Search time 5.83333 Seconds (without alignments) 15.202 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    129505 seqs, 22169297 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 nyda 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.3
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

19	18	17	16	15	14	13	12	11	10	9	8	7	6	ر ن	4	ω	2	_	Result
23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	Score
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Query Match Length
539	501	500	469	423	404	400	370	343	292	236	230	167	152	146	122	72	36	28	ength DB
9	10	9	9	10	9	10	10	10	10	9	12	10	10	9	10	10	10	10	. ₩
US-09-738-626-6722	US-09-934-706-4	US-10-157-855-17	US-09-738-626-4947	US-09-815-242-5817	US-09-738-626-5170	US-09-934-706-5	US-09-804-551B-6	US-09-934-706-1	US-09-927-180-19	US-09-738-626-4034	US-10-029-630-4	US-09-925-300-981	US-09-990-205-4	US-10-047-260-14	US-09-853-386-102	US-09-864-761-43317	US-09-864-761-35859	US-09-864-761-43895	ID
Sequence 6722, Ap	Sequence 4, Appli	Sequence 17, Appl	Sequence 4947, Ap	•	Sequence 5170, Ap		Sequence 6, Appli	Sequence 1, Appli	Sequence 19, Appl	Sequence 4034, Ap	Sequence 4, Appli	Sequence 981, App	Sequence 4, Appli	Sequence 14, Appl	Sequence 102, App	Sequence 43317, A	Sequence 35859, A	Sequence 43895, A	Description

RESULT 1 US-09-864-76 Sequence 4 Sequence 10 Sequence 11 Sepuence 12 Sepuence 13 Sepuence 14 Sepuence 14 Sepuence 17 Sepuence	444444333333333222222222 444444333333333
	23 100 23 100 25 100 27 100 28
ication 8763A1 8	546 10 549 10 554 10 5576 12 576 12 0 576 12 0 579 9 0 599 9 0 606 19 0 687 9 0 687 10 0 688 10 0 708 10 0 721 9 0 721 9 0 739 9 0 721 9 0 805 10 0 805 10 0 11136 10 1136 10 1136 10
/09864761 DME-DERIVED SINGLE RESSION ANALYSIS BY 5/09/864,761 23 50/180,312 50/207,456 50/236,359 24263.6 50/236,359 /US01/00666 /US01/00666 /US01/00666 /US01/00669 /US01/00668 /US01/00668 /US01/00668 /US01/00668 /US01/00668 /US01/00668	0 US-09-815-242-5510 0 US-09-815-242-12592 0 US-09-825-063-79 0 US-09-841-132-523 2 US-10-007-693-73 2 US-10-108-605-99 0 US-10-108-605-99 0 US-10-108-605-163 0 US-09-738-626-6180 0 US-09-969-384-12 0 US-09-969-384-27 0 US-09-927-180-23 0 US-09-927-180-23 0 US-09-927-180-23 0 US-09-927-180-29 0 US-09-938-5242-12769 0 US-09-815-242-12814 0 US-09-815-242-5522
EXON NUCLEIC ACID PROBES USEFUL FO	Sequence 5510, Ap Sequence 12592, A Sequence 79, Appl Sequence 73, Appl Sequence 523, Appl Sequence 13023, A Sequence 163, App Sequence 168, Appl Sequence 16, Appl Sequence 27, Appl Sequence 27, Appl Sequence 27, Appl Sequence 23, Appl Sequence 3102, Ap Sequence 731, Appl Sequence 731, Appl Sequence 3507, Ap Sequence 3507, Ap Sequence 731, Appl Sequence 731, Appl Sequence 3507, Ap Sequence 588, Ap Sequence 588, Ap Sequence 586, Ap Sequence 586, Ap Sequence 5872, Appl Sequence 5836, Ap

```
RESULT 2
US-09-864-761-35859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-864-761-43895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 35859, Application Patent No. US20020048763A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 43895
LENGTH: 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
OTHER INFORMATION: M
OTHER INFORMATION: E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY FILE REFERENCE: Acomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K
APPLICANT: Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 60/207,456 PRIOR FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: US 60/180,312 PRIOR FILING DATE: 2000-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                   FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00667
APPLICATION NUMBER: PCT/US01/00664
APPLICATION NUMBER: PCT/US01/00664
                                                                                                                                                                                                                                                                                                         FILING DATE: 2000-10-04
APPLICATION NUMBER: US 60/236,359
FILING DATE: 2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 2000-01
                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 2000-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 09/774,203 FILING DATE: 2001-01-29
                 APPLICATION NUMBER: PCT/US01/00662
                                 APPLICATION NUMBER: PCT/US01/00663 FILING DATE: 2001-01-30
                                                                     FILING DATE: 2001-01-30
                                                                                         APPLICATION NUMBER:
                                                                                                                               APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                 FILING DATE: 2001-01-30
                                                                                                                                                                     FILING DATE: 2001-01-30 APPLICATION NUMBER: PCT/US01/00669
                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: PCT/US01/00666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 09/608,408 FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 60/234,687 FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: PCT/US01/00670 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NYDA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hanzel, David F
Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/09864761
                                                                                                                                                                                                                                                                                                                                                                                 2000-05-26
NUMBER: US 09/632,366
2000-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : MAP TO AC005083.1
: EXPRESSED IN LUNG,
: EXPRESSED IN FETAL
: EXPRESSED IN BRAIN
: EXPRESSED IN ADULT
: EXPRESSED IN BONE I
                                                                                                           2001-01-30
2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                 GB 24263.6
                                                                                         PCT/US01/00668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D IN LUNG, SIGNAL = 0.48
D IN FETAL LIVER, SIGNAL = 0
D IN BRAIN, SIGNAL = 0.58
D IN ADULT LIVER, SIGNAL = 0
D IN BONE MARROW, SIGNAL = 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 23; DB
Pred. No. 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0.72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROBES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USEFUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-864-761-43317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-864-761-35859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 35859
LENGTH: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: MOTHER INFORMATION: EOTHER 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT
                                                                                        PRIOR
                                                                                                                                                                                                     PRIOR PRIOR
                                                                                                                                                                                                                                                               PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: GB 24263.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR FILING DATE: 2000-09-21
PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
NUMBER OF SEQ ID NOS: 49117
                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Annomax Sequence Listing
                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Penn,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30 NYDA 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                APPLICATION NUMBER: PCT/US01/00667 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                               FILING DATE: 2000-10-04 PAPPLICATION NUMBER: US 60/236,359
APPLICATION NUMBER: PCT/US01/00669 FILING DATE: 2001-01-30
                                                         FILING DATE:
                                                                                     APPLICATION NUMBER: PCT/US01/00664
                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                     APPLICATION NUMBER: PCT/US01/00666
                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/09/864,761 FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                43317, Application 5. US20020048763A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hanzel,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MAP TO ACO10732.1
EXPRESSED IN PLACE EXPRESSED IN LUNCH EXPRESSED IN LUNCH EXPRESSED IN BONE EXPRESSED IN BONE EXPRESSED IN ADULE EXPRESSED IN BT47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            David R.
, David K.
                                                                                                                                                                             2001-01-30
                                                      2001-01-30
                                                                                                                                                                                                                                       2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EXPRESSED
EST_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              us/09864761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HIT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N HEART SIGNAL = 1.3
N LUNG, SIGNAL = 8.4
N BONE MARROW, SIGNAL = 8.1
N FETAL LIVER, SIGNAL = 1.1
N ADULT LIVER, SIGNAL = 3.1
N BT474, SIGNAL = 3.1
N BT474, SIGNAL = 3.1
N BT474, SIGNAL = 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HBL100, SIGNAL = 15
BRAÎN, SIGNAL = 1.7
T: AW403965.1, EVALUE 2.00e-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PLACENTA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Engine vers. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ۷
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6 1 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROBES
```

0;

USEFUL

FO

```
PRIOR APPLICATION NUMBER: PCT/US01/0061

PRIOR FILING DATE: 2001-01-30

PRIOR APPLICATION NUMBER: PCT/US01/00670

PRIOR APPLICATION NUMBER: US 00/234,687

PRIOR FILING DATE: 2001-09-21

PRIOR APPLICATION NUMBER: US 09/608,408

PRIOR APPLICATION NUMBER: US 09/704,203

PRIOR APPLICATION NUMBER: US 09/774,203

PRIOR FILING DATE: 2000-06-30

PRIOR FILING DATE: 2001-01-29

NUMBER OF SEQ ID NOS: 49117

SOFTWARE: Annomax Sequence Listing Engine vers. 1.1

SEQ ID NO 43317

LENGTH: 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: MAP TO AC004983.2
; OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 0.75
; OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 0.67
; OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 0.53
; OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 0.57
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.86
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.86
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.86
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.86
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.86
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.86
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.86
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.89
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.75
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.75
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.75
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.75
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.75
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.89
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 0.80
; OTHER INFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
   밁
                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-853-386-102
                                                                                                                                                                                                                                                                                                          ; ORGANISM: HUMAN US-09-853-386-102
                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn version 3.1
SEQ ID NO 102
LENGTH: 122
TYPE: PRT
                                                                                                                                                                                           Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 102, Application Patent No. US20020049151A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/853,386
CURRENT FILING DATE: 2001-05-11
PRIOR APPLICATION NUMBER: US 60/203645
PRIOR FILING DATE: 2000-05-12
NUMBER OF SEQ ID NOS: 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: Therapeutic Approaches to Diseases by Suppression of the TITLE OF INVENTION: Subfamily of Nuclear Transcription Factors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Murphy, Evelyn
APPLICANT: Bresnihan, Barry
APPLICANT: Conneely, Orla
APPLICANT: Fitzgerald, Oliver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: P01972US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60 NYDA 63
   59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                               1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: PCT/US01/00662 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: PCT/US01/00668
NYDA 62
                                                                                                                                                       4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/09853386
                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; s
100.0%; F
htive 0;
                                                                                                                                                                                       100.0%;
                                                                                                                                                       0
                                                                                                                                                   Score 23; DB Pred. No. 73; ); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 23; DB
Pred. No. 43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                              DB 10; Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                   0;
                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

```
RESULT 7
US-09-925-300-981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 5
US-10-047-260-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-990-205-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-047-260-14
                                                                                                                                                                                                                                                                                                                                                                                            us-09-990-205-4
GENERAL INFORMATION:
APPLICANY: Craig Rosen,
APPLICANY: Steve Ruben
TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REFERENCE: PA101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 5
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: FOON, KENNETH A.
APPLICANT: CHATTERJEE, Malaya
TITLE OF INVENTION: METHODS AND
FILE REFERENCE: 304142000501
                                                                                                   Sequence 981, Application US/09925300 Patent No. US20020151681A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 14, Application US/10047260 Patent No. US20020164706A1
                                                                                                                                                                                                                                                                                                       Query Match 100.0%; Score 23; Best Local Similarity 100.0%; Pred. No. Matches 4; Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/09990205 Patent No. US20020150572A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/047,260 CURRENT FILING DATE: 2002-01-15 PRIOR APPLICATION NUMBER: 60/264,925 PRIOR FILING DATE: 2001-01-30 NUMBER OF SEQ ID NOS: 40 SOFTWARE: Microsoft Office 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Huang, Lisa
APPLICANT: McClusky, Michael
APPLICANT: LaRossa, Robert
TITLE OF INVENTION: HIGH LEVEL PROMOTERS FROM CYANOBACTERIA
FILE REFERENCE: CL1715 US NA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: U.S. 60/065,774
PRIOR FILING DATE: 1997-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: U.S. 09/192,838 PRIOR FILING DATE: 1998-11-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/990,205
CURRENT FILING DATE: 2001-11-20
                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 152
TYPE: PRT
ORGANISM: Mus Musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT ORGANISM: Synechocystis sp. strain PCC6803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH: 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120 NYDA 123
                                                                                                                                                                                                                               119 NYDA 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NYDA 4
                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
llarity 100.0%;
Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AND COMPOSITIONS FOR THE TREATMENT OF PSORIASIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23; DB Pred. No. 88; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                      DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 146;
                                                                                                                                                                                                                                                                                                                                                    Length 152;
                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                           0;
```

```
Š
                                                                                                                                                                              US-09-738-626-4034
                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                             US-10-029-630-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  us-10-029-630-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids US-09-925-300-981
                                                                                                                              Sequence 4034, Application US/09738626 Publication No. US20020197605A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 8
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Boehringer Ingelheim Pharma KG
TITLE OF INVENTION: Method for identifying substances which positively
TITLE OF INVENTION: influence inflammatory conditions
FILE REFERENCE: 1/1179
                                                                                                                                                                                                                                                                                                                           Query Match
Best Local (
                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4, Application US/10029630 Patent No. US20020137099A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Pa
                                                                                APPLICANT:
                                                                                                                APPLICANT: NAKAGAWA, SATOSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/10/029,630 CURRENT FILING DATE: 2001-12-21
                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US 60/257,856
PRIOR FILING DATE: 2000-12-22
   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/124,270 PRIOR FILING DATE: 1999-03-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 1890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 2000-03-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/925,300 CURRENT FILING DATE: 2001-08-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 167
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: SITE LOCATION: (70) OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: SITE
LOCATION: (162)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                               140 NYDA 143
                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80 NYDA 83
                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PatentIn Ver. 2.0
YOKOI, HARUHIKO
TATEISHI, NAOKO
SENOH, AKIHIRO
                                            OCHIAI, KEIKO
                                                                                ANDO,
                                                                                            MIZOGUCHI,
                                                             HAYASHI, MIKIRO
                                                                                                                                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; ilarity 100.0%; Conservative 0
                                                                                SEIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xaa equals any of the naturally occurring L-amino acids
                                                                                             HIROSHI
                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-08-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT/US00/05988
                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                      Score 23; DB 12;
Pred. No. 1.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 10; Length 167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                      Length 230;
                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
```

```
SEQUENCE DESCRIPTION: SEQ ID NO; 19: US-09-927-180-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
US-09-927-180-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Corynebacterium glutamicum US-09-738-626-4034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 19, Application US/09927180 Patent No. US20020106364A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 4034
LENGTH: 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR FILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: JP 99/377484
PRIOR FILING DATE: 1999-12-16
PRIOR APPLICATION NUMBER: JP 00/159162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
                                                                                                               INFORMATION FOR SEQ ID NO: 19: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn ver. 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 2000-04-07 | PRIOR APPLICATION NUMBER: JP 00/159162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES FILE REFERENCE: 249-125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37 NYDA 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                              APPLICATION NUMBER: 09/519/223
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/927,180
FILING DATE: 09-Aug-2001
CLASSIFICATION: CURKNOWN>
                                                                                                                                                                    TELEPHONE: (617) 498-8224
                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Calcium Independent Phospholipase A2/B NUMBER OF SEQUENCES: 25 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                         TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatiblé
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO)
                                                                                                                                                      TELEFAX:
                                                                                                                                                                                                            REGISTRATION NUMBER: 32,724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE: Massachusetts COUNTRY: U.S.A.
                                                                                                                                                                                                                            NAME: Brown, Scott A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IKEDA, MASATO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jones,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EE: Genetics Institute, Inc. 87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AKIO
                                                                                                                                                    (617)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 23; DB 9; 100.0%; Pred. No. 1.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Simon
                                                                                                                                                      876-5851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 236;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

Query Match

100.0%;

Score 23;

DB 10;

Length 292;

```
ş
                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-804-551B-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
US-09-934-706-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                              US-09-804-551B-6
                                                                                                                                                                                                                                                                                                                                                                     Sequence 6, Application US/09804551B Patent No. US20020056151A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Terumo Corporation
TITLE OF INVENTION: Functional
TITLE OF INVENTION: Activity
FILE REFERENCE: 19990120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE:
SEQ ID NO 1
LENGTH: 343
TYPE: PRI
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/09934706
Patent No. US20020102709A1
                                                      Query Match
Best Local :
                                                                                                                                                                                   SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                   CURRENT FILING DATE: 2001-03-12
PRIOR APPLICATION NUMBER: DE 100 13 618.4
PRIOR FILING DATE: 2000-03-18
NUMBER OF SEQ ID NOS: 92
SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                            APPLICANT: Bayer Aktiengesellschaft
TITLE OF INVENTION: Receptors for peptides from insects
FILE REFERENCE: Le A 34 394
CURRENT APPLICATION NUMBER: US/09/804,551B
CURRENT FILING DATE: 2001-03-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/934,706
CURRENT FILING DATE: 2001-08-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 16
                                                                                                                     TYPE: PRT ORGANISM: Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: DOMAIN
LOCATION: (2)..(341)
OTHER INFORMATION: /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: CONFLICT
LOCATION: (125)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: CONFLICT LOCATION: (69)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Description of Artificial Sequence: Modified Human OTHER INFORMATION: Fibronectin Collagen-Binding Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: INIT _MET
                                                                                                                                                              LENGTH: 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162 NYDA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          151 NYDA 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NYDA 4
 1 NYDA 4
                                    4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (125)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ilarity 100.0%; Pred. No. 1.7e+02; Conservative 0; Mismatches 0;
                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="human fibronectin collagen-binding domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                100.0%;
                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hybrid Polypeptide with Collagen-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23;
Pred. No.
                                                    Score 23; I
Pred. No. 2.
                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 10;
                                                                       DB 10;
                                                    .2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 343;
                                                                     Length 370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                  0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: /note="human epidermal growth factor" US-09-934-706-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
US-09-738-626-5170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-934-706-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 5
LENGTH: 40
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                         Sequence 5170, Application US/09738626 Publication No. US20020197605A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence 5, Application US/09934706
Patent No. US20020102709A1
GENERAL INFORMATION:
APPLICANT: Terumo Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Functional Hybrid Polypeptide with Collagen-binding TITLE OF INVENTION: Activity FILE REFERENCE: 19990120
                                              CURRENT APPLICATION NUMBER: US/09/738,626 CURRENT FILING DATE: 2000-12-18 PRIOR APPLICATION NUMBER: JP 99/377484 PRIOR FILING DATE: 1999-12-16 PRIOR APPLICATION NUMBER: JP 00/159162 PRIOR APPLICATION NUMBER: JP 00/159162 PRIOR FILING DATE: 2000-04-07
                                                                                                                                                              APPLICANT: IKEDA, MASATO
APPLICANT: OZAKI, AKIO
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/934,706
CURRENT FILING DATE: 2001-08-23
NUMBER OF SEQ ID NOS: 16
                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: NAKAGAWA, SATOSHI
               PRIOR APPLICATION NUMBER: JP 00/280988 PRIOR FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: INIT _MET
LOCATION: (1)
NAME/KEY: DOMAIN
LOCATION: (2)..(341)
OTHER INFORMATION: /note="human fibronectin collagen-binding domain"
NAME/KEY: PEPTIDE
LOCATION: (343)..(347)
OTHER INFORMATION: /note=" enterokinase recognition sequence"
NAME/KEY: PEPTIDE
LOCATION: (348)..(400)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: Description of Artificial Sequence:Hybrid OTHER INFORMATION: Polypeptide of Human Fibronectin Collagen-Binding OTHER INFORMATION: Domain and Human Epidermal Growth Factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          162 NYDA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    106 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                400
                                                                                                                                                                                                                                  YOKOI, HARUHIKO
TATEISHI, NAOKO
SENOH, AKIHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109
                                                                                                                                                                                                                                                                                                                                                    MIZOGUCHI, HIROSHI
                                                                                                                                                                                                                                                                                          OCHIAI, KEIKO
                                                                                                                                                                                                                                                                                                             HAYASHI, MIKIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                    SEIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

Gaps

```
RESULT 16
US-09-738-626-4947
; Sequence 4947, Application US/09738626
; Publication No. US20020197605A1
                                                                                                                                                                                                                                                                        FEATURE:

NAME/KEY: VARIANT

LOCATION: (1)...(423)

OTHER IMPORMATION: Xaa = Any Amino Acid
US-09-815-242-5817
                                                                                                                                                                δÃ
                                                                                                                              뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/206,848
PRIOR FILLING DATE: 2000-05-23
PRIOR PELLORITION NUMBER: 60/207,727
PRIOR FILLING DATE: 2000-05-26
PRIOR FILLING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: 60/242,578
PRIOR FILLING DATE: 2000-10-23
PRIOR APPLICATION NUMBER: 60/253,625
PRIOR FILLING DATE: 2000-11-27
PRIOR APPLICATION NUMBER: 60/257,931
PRIOR APPLICATION NUMBER: 60/257,931
PRIOR FILLING DATE: 2000-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-815-242-5817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Corynebacterium glutamicum US-09-738-626-5170
                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 14110
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 5817
LENGTH: 423
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 5817, Application US/09815242 Patent No. US20020061569A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn ver.
SEQ ID NO 5170
LENGTH: 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: ELITRA.011A
CURRENT APPLICATION NUMBER: US/09/815,242
CURRENT FILING DATE: 2001-03-21
PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Xu, H. Howard
TITLE OF INVENTION: Identification of Essential Genes in
TITLE OF INVENTION: Prokaryotes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/269,308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Haselbeck, Robert APPLICANT: Ohlsen, Kari L.
                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Staphylococcus aureus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  164 NYDA 167
                                                                                                                            33 NYDA 36
                                                                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wall, Daniel
Trawick, John D.
Carr, Grant J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zyskind, Judith W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yamamoto, Robert T.
                                                                                                                                                                                                 100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
ilarity 100.0%;
Conservative 0
                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                             Score 23; DB 10;
Pred. No. 2.5e+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23; DB 9;
Pred. No. 2.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 9; Length 404;
                                                                                                                                                                                                                               Length 423;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 17
US-10-157-855-17
; Sequence 17, Application US; Patent No. US20020170091A1
                                                                                                                                                            ; ORGANISM: Rattus sp. US-10-157-855-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Corynebacterium glutamicum US-09-738-626-4947
                                                                               Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-125
CURRENT APPLICATION NUMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: UP 99/377484
PRIOR FILING DATE: 1999-12-16
PRIOR FILING DATE: 1999-12-16
PRIOR FILING DATE: 2000-04-07
PRIOR FILING DATE: 2000-04-07
PRIOR FILING DATE: 2000-08-03
PRIOR FILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 46
SOFTWARE: PATENTIN VER. 2.1
SEQ ID NO 17
LENGTH: 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                    APPLICANT: Ruezinsky, Diane M.
TITLE OF INVENTION: Acyl-CoA:cholesterol Acyltransferase Related Nucleic TITLE OF INVENTION: Acyl-CoA:cholesterol Acyltransferase Related Nucleic Strike Of Invention: Acyl-CoA:cholesterol Acyltransferase Related Nucleic CURRENT FILING UNMER: US/10/157,855
CURRENT APPLICATION NUMBER: 09/326,203 | PRIOR APPLICATION NUMBER: 09/326,203 | PRIOR FILING DATE: 1998-06-04 | PRIOR PILING DATE: 1998-06-04 | PRIOR APPLICATION NUMBER: 60/088,143 | PRIOR APPLICATION NUMBER: 60/108,389 | PRIOR APPLICATION NUMBER: 60/108,389 | PRIOR PILING DATE: 1998-01-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn ver. 3.0 SEQ ID NO 4947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Lassner, Michael W. APPLICANT: Ruezinsky, Diane N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: NAKAGAWA, SATOSHI
                                                                                                                                                                                                 LENGTH: 50
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
493 NYDA 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                379 NYDA 382
                                                                                               Local Similarity
                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10157855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IKEDA, MASATO
OZAKI, AKIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OCHIAI, KEIKO
YOKOI, HARUHIKO
TATEISHI, NAOKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SENOH, AKIHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HAYASHI, MIKIRO
                                                                          100.0%; Score 23; ilarity 100.0%; Pred. No. Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MIZOGUCHI, HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
nilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 23; DB 9; Le
Pred No. 2.8e+02;
Pred No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                          Mismatches
                                                                                           3e+02;
                                                                                                              DB 9; Length 500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 469;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                      Gaps
                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

```
RESULT 19
US-09-738-626-6722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-934-706-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-934-706-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Terumo Corporation
TITLE OF INVENTION: Functional Hybrid Polypeptide with Collagen-binding
TITLE OF INVENTION: Activity
FILE REFERENCE: 19990120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 6722, Application US/09738626 Publication No. US20020197605A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 4
LENGTH: 501
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4, Application US/09934706 Patent No. US20020102709A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
SEQ ID NO 6722
LENGTH: 539
                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                             APPLICANT: OZAKI, AKTO
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-125
CURRENT APPLICATION NUMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: JP 99/377484
PRIOR FILING DATE: 1999-12-16
                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/934,706
CURRENT FILING DATE: 2001-08-23
                                       PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR FILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
SOFTWARE: PatentIn ver. 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT FILING DATE: 2001-08-23
NUMBER OF SEQ ID NOS: 16
                                                                                                                         PRIOR APPLICATION NUMBER: JP 00/159162
PRIOR FILING DATE: 2000-04-07
                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: (2)..(341)
OTHER INFORMATION: /note="human fibronectin collagen-binding domain"
NAME/KEY: PEPTIDE
LOCATION: (343)..(347)
OTHER INFORMATION: /note="enterokinase recognition sequence"
NAME/KEY: PEPTIDE
LOCATION: (348)..(501)
OTHER INFORMATION: /note="human fibroblast growth factor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Description of Artificial Sequence:Hybrid OTHER INFORMATION: Polypeptide of Human Fibronectin Collagen-Binding OTHER INFORMATION: Domain and Human Basic Fibroblast Growth Factor NAME/KEY: INIT _MET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 162 NYDA 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match 100.0%; Score 23; Local Similarity 100.0%; Pred. No. es 4; Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAKAGAWA, SATOSHI
                                                                                                                                                                                                                                                                                                                                       TATEISHI, NAOKO
SENOH, AKIHIRO
                                                                                                                                                                                                                                                                                                                                                                                                   HAYASHI, MIKIRO
OCHIAI, KEIKO
                                                                                                                                                                                                                                                                                                                                                                                 YOKOI, HARUHIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                               ANDO, SEIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MIZOGUCHI, HIROSHI
                                                                                                                                                                                                                                                                                                                   IKEDA,
                                                                                                                                                                                                                                                                                             , MASATO
, AKIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10; Length 501;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
```

```
; TYPE: PRT ; ORGANISM: Staphylococcus aureus US-09-815-242-5510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; ORGANISM: Corynebacterium glutamicum US-09-738-626-6722
                                                                                                                                                       RESULT 21
US-09-815-242-12592
                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-815-242-5510
                                                                                                                    ; Sequence 12592, Application US/09815242
; Patent No. US20020061569A1
                                                                  GENERAL INFORMATION:
APPLICANT: Haselbeck, Robert
APPLICANT: Ohlsen, Kari L.
                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 14110
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 5510
LENGTH: 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/815,242
CURRENT FILING DATE: 2001-03-21
PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: 60/206,848
PRIOR FILING DATE: 2000-05-23
PRIOR APPLICATION NUMBER: 60/207,727
PRIOR FILING DATE: 2000-05-26
PRIOR FILING DATE: 2000-05-26
                                   APPLICANT:
                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Identification of Essential Genes in TITLE OF INVENTION: Prokaryotes FILE REFERENCE: ELITRA.011A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/257,931 PRIOR FILING DATE: 2000-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/253,625 PRIOR FILING DATE: 2000-11-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/242,578 PRIOR FILING DATE: 2000-10-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Haselbeck,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/269,308
                                                                                                                                                                                                                         528 NYDA 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        252 NYDA
                                                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5510, Application US/09815242
5. US20020061569A1
                                                                                                                                                                                                                                                                                            4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        255
                                Ohlsen, Kari L.
Zyskind, Judith W.
Wall, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carr,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Trawick, John D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ohlsen, Kari L.
Zyskind, Judith W.
Carr, Grant
                Trawick, John D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Xu, H. Howard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wall, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yamamoto, Robert T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Grant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                          100.0%; Score 23;
100.0%; Pred. No.
                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 23; DB 9;
Pred. No. 3.2e+02;
                                                                                                                                                                                                                                                                                                              Pred. No. 3.2e+02
                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 539;
                                                                                                                                                                                                                                                                                                                            Length 546;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

ij

```
밁
RESULT 23
US-09-841-132-523
                                                                              밁
                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 å
                                                                                                                                                                                                                                     ; LENGTH: 551
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-529-063-79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-529-063-79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: JP 9-274674
PRIOR FILING DATE: 1997-10-07
NUMBER OF SEQ ID NOS: 117
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: FastSEQ for Windows Version SEQ ID NO 12592 LENGTH: 549
                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Staphylococcus aureus
                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 79, Application US/09529063 Patent No. US20020102542A1
                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/529,063
CURRENT FILLIG DATE: 2000-04-07
PRIOR APPLICATION NUMBER: PCT/JP98/04514
PRIOR FILING DATE: 1998-10-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/815,242
CURRENT FILING DATE: 2001-03-21
PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: 60/206,848
PRIOR FILING DATE: 2000-05-23
PRIOR APPLICATION NUMBER: 60/207,727
PRIOR ETILING DATE: 2000-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: POLYPEPTIDE, CDNA ENCODING THE POLYPEPTIDE, AND USE OF TITLE OF INVENTION: THE BOTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: 60/242,578
PRIOR FILING DATE: 2000-10-23
PRIOR APPLICATION NUMBER: 60/253,625
PRIOR TLING DATE: 2000-11-27
PRIOR APPLICATION NUMBER: 60/257,931
PRIOR FILING DATE: 2000-12-22
PRIOR FILING DATE: 2000-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: Q58769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: FUKUSHIMA, DAIKICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/269,308 PRIOR FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Xu, H. Howard
TITLE OF INVENTION: Identification of Essential Genes
TITLE OF INVENTION: Prokaryotes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               528 NYDA 531
                                                                              31 NYDA 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity es 4; Conserv
                                                                                                                  1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                        4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SHIBAYAMA, SHI
TADA, HIDEAKI
                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 23; Dilarity 100.0%; Pred. No. 3.:
Conservative 0; Mismatches
                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SHIRO
                                                                                                                                                        0;
                                                                                                                                                                        Score 23; DB 10;
Pred. No. 3.3e+02
                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 549;
                                                                                                                                                                                          Length 551;
                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Chlamydia pneumoniae US-10-007-693-73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Chlamydia pneumoniae US-09-841-132-523
                                                                                                                                                                                                                                                                     US-09-815-242-13023
                                                                                                                                                                                                                                                                                      RESULT 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-007-693-73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                         GENERAL INFORMATION:

APPLICANT: Haselbeck, Robert
APPLICANT: Ohlsen, Kari L.
APPLICANT: Zyskind, Judith w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 157
SEQ ID NO 73
LENGTH: 576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 73, Application US/10007693 Patent No. US20020146776A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/841,132
CURRENT FILING DATE: 2001-04-23
NUMBER OF SEQ ID NOS: 599
SOFTWARE: PastSEQ for Windows Version 3.0/
SEQ ID NO 523
LENGTH: 576
                                                                                                                                                                                                                                 Sequence 13023, Application US/09815242 Patent No. US20020061569A1
                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 523, Application US/09841132
Patent No. US20020061848A1
            APPLICANT: Yamamoto, Robert T.

APPLICANT: Xu, H. Howard

TITLE OF INVENTION: Identification of Essential Genes

TITLE OF INVENTION: Prokaryotes

FILE REFERENCE: ELITRA.011A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Bhatia, Ajay
APPLICANT: Probst, Peter
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR TREATMENT
TITLE OF INVENTION: AND DIAGNOSIS OF CHLAMYDIAL INFECTION
FILE REFERENCE: 210121.515C2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Bhatia, Ajay
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Probst, Peter
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATMENT
TITLE OF INVENTION: DIAGNOSIS OF CHLAMYDIAL INFECTION
FILE REFERENCE: 210121.46908
                                                                                      APPLICANT:
                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/10/007 CURRENT FILING DATE: 2001-12-05
CURRENT APPLICATION NUMBER: US/09/815,242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       171 NYDA 174
                                                                                                                                                                                                                                                                                                                                         171 NYDA 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                         l Similarity
4; Conserva
                                                                                                                                           Wall, Daniel
                                                                                                                                                           Ohlsen, Kari L.
Zyskind, Judith W.
                                                                                                      Carr, Grant
                                                                                                                        Trawick, John D.
                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                              Score 23;
Pred! No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        red. No. 3.4
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          , 693
                                                                                                                                                                                                                                                                                                                                                                                                                              ; DB 12;
. 3.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 3.4e+02;
thes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 576;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 576;
                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                     Í'n
                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

```
APPLICANT: Stam, Lynn
APPLICANT: Stam, Lynn
APPLICANT: Bachmann, Jane
APPLICANT: Bachmann, Jane
APPLICANT: Bachmann, Jane
APPLICANT: Kamdar, Kim
TITLE OF INVENTION: NUCLEIC ACID SEQUENCES FROM DROSOPHILA MELANOGASTER THAT ENCODE
TITLE OF INVENTION: PROTEINS ESSENTIAL FOR LARVAL VIABILITY AND USES THEREOF
FILE REFERENCE: 31133B
CURRENT APPLICATION NUMBER: US/10/108,605
CURRENT FILING DATE: 2002-03-27
PRIOR APPLICATION NUMBER: US 09/761,142
PRIOR APPLICATION NUMBER: US 09/761,142
PRIOR FILING DATE: 2001-01-16
PRIOR FILING DATE: 2001-01-14
NUMBER OF SEQ ID NOS: 361
SOFTMARE: Patentin Ver. 2.1
SEQ ID NO 99
LENGTH: 599
TYPE: PRT
RESULT 27
US-10-108-605-163
; Sequence 163, Application US/10108605
; Patent NO. US20020160934A1
: GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 26
US-10-108-605-99
; Sequence 99, Application US/10108605
partent No. US20020160934A1
                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Drosophila melanogaster US-10-108-605-99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Staphylococcus aureus US-09-815-242-13023
                                                                                                                                                                              밁
                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                        Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: FastSEQ for Windows Version SEQ ID NO 13023
LENGTH: 578
                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/242,578 PRIOR FILING DATE: 2000-10-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR EILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 2000-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 14110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180 NYDA 183
                                                                                                                                                                            71 NYDA 74
                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  / Match 100.0%; Score 23; DB 10;
Local Similarity 100.0%; Pred. No. 3.4e+02;
nes 4; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/257,931 FILING DATE: 2000-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/253,625 FILING DATE: 2000-11-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 2000-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/269,308
                                                                                                                                                                                                                                                      100.0%; Score 23; DB 9; ilarity 100.0%; Pred. No. 3.6e+02; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000-03-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-03-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/206,848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/191,078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.0
                                                                                                                                                                                                                                                                                           Length 599;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 578;
                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                      0;
```

```
US-09-738-626-6180

; Sequence 6180, Application US/09738626

; Publication No. US20020197605A1
                                                                                                  밁
                                                                                                                                                                                                                           FEATURE:

NAME/KEY: PEPTIDE

LOCATION: (1)..(606)

COTHER INFORMATION: Amino acid sequence of Drosophila Hexosaminidase-1 shown in

OTHER INFORMATION: e 2.

US-09-750-703-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                   RESULT 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-750-703-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Drosophila melanogaster US-10-108-605-163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 163
LENGTH: 599
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 4, Application US/09750703 Patent No. US20020065404A1
                                                                                                                                                                Matches
                                                                                                                                                                              Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: US 60/174,612
PRIOR FILING DATE: 2000-01-05
NUMBER OF SEQ ID NOS: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 09/761,142
PRIOR FILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: US 60/176,418
PRIOR ETLING DATE: 2000-01-14
NUMBER OF SEQ ID NOS: 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Kamdar, Kim
TITLE OF INVENTION: NUCLEIC ACID SEQUENCES FROM DROSOPHILA MELANOGASTER THAT ENCOD
TITLE OF INVENTION: PROTEINS ESSENTIAL FOR LARVAL VIABILITY AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Betenbaugh, Michael APPLICANT: Palter, Karen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/108,605
CURRENT FILING DATE: 2002-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                    LENGTH: 606
TYPE: PRT
ORGANISM: Drosophila melanogaster
                                                                                                  475 NYDA 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   71 NYDA 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 100.
nes 4; Conservative
                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                             Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stam, Lynn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bachmann,
                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jane
                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 23; DI
100.0%; Pred. No. 3.0
Live 0; Mismatches
                                                                                                                                                                0;
                                                                                                                                                                              Score
Pred.
                                                                                                                                                                  Mismatches
                                                                                                                                                                              No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3.6e+02;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 9;
                                                                                                                                                                                             DB 10;
                                                                                                                                                                               .6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 599;
                                                                                                                                                                                           Length 606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                Indels
                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                              Ŧ
```

GENERAL INFORMATION:

APPLICANT: NAKAGAWA, SATOSHI APPLICANT: MIZOGUCHI, HIROSH

```
US-09-969-384-27
; Sequence 27, Application US/09969384
; Publication No. US20020192749A1
; GENERAL INFORMATION:
; APPLICANT: Moore, et al.
                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: UP 99/377484
PRIOR FILING DATE: 1999-12-16
PRIOR PRIOR DATE: 1999-12-16
PRIOR ETILING DATE: 2000-04-07
PRIOR PILING DATE: 2000-04-07
PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR PILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
SOFTWARE: PACENTIN VET. 3.0
SEQ ID NO 6180
                                                                                                          RESULT 31
                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Homo sapiens US-09-969-384-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TYPE: PRT; ORGANISM: Corynebacterium glutamicum US-09-738-626-6180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/969,384
CURRENT FILING DATE: 2001-10-03
PRIOR APPLICATION NUMBER: PCT/US01/10542
PRIOR FILING DATE: 2001-04-02
PRIOR APPLICATION NUMBER: 60/236,384
PRIOR APPLICATION NUMBER: 60/236,384
PRIOR FILING DATE: 2000-09-29
PRIOR APPLICATION NUMBER: 60/194,118
PRIOR APPLICATION NUMBER: 60/194,118
PRIOR FILING DATE: 2000-04-03
NUMBER OF SEQ ID NOS: 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 16
LENGTH: 687
TYPE: PRT
                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 16, Application US/09969384 Publication No. US20020192749A1
                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%; Score 23; DB 9; Best Local Similarity 100.0%; Pred. No. 3.8e+02; Matches 4; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Moore, et al.
TITLE OF INVENTION: Human Gene Polynucleotides, Polypeptides, and Antibodies
FILE REFERENCE: PT055P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES FILE REFERENCE: 249-125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 647
                                                                                                                                                                        329 NYDA 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               340 NYDA 343
                                                                                                                                                                                                                                                        Local Similarity es 4; Conserv
                                                                                                                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HAYASHI, MIKIRO
OCHIAI, KEIKO
YOKOI, HARUHIKO
TATEISHI, NAOKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OZAKI, AKIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SENOH, AKIHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IKEDA, MASATO
                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                          Score 23; DB 9; Pred. No. 4.1e+02;
                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                              Length 687;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 647;
                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
```

```
Query Match
Best Local Similarity
"-+-hes 4; Conserv
                                                                                               US-09-927-180-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 32

US-09-927-180-21

; Sequence 21, Application US/09927180

; Patent No. US20020106364A1

; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: PRT; ORGANISM: Homo sapiens US-09-969-384-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/969,384
CURRENT FILING DATE: 2001-10-03
PRIOR APPLICATION NUMBER: PCT/US01/10542
PRIOR FILING DATE: 2001-04-02
PRIOR APPLICATION NUMBER: 60/236,384
PRIOR APPLICATION NUMBER: 60/236,384
PRIOR FILING DATE: 2000-09-29
PRIOR APPLICATION NUMBER: 60/194,118
PRIOR FILING DATE: 2000-04-03
NUMBER: OF SEQ ID NOS: 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Human Gene Polynucleotides, Polypeptides, and Antibodies FILE REFERENCE: PT055P1
                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 21: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            329 NYDA 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-8224
TELEFAX: (617) 876-5851
                                                                                                               MOLECULE TYPE: protein SEQUENCE DESCRIPTION: (
                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/519
FILING DATE: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 02140
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Calcium Independent Phospholipase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Jones, Simon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn Ver. 2.0
                                                                                                                                                                        LENGTH: 687 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/09/927,180
FILING DATE: 09-Aug-2001 |
CLASSIFICATION: <Unknown> |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk | COMPUTER: IBM PC compatible | OPERATING SYSTEM: PC-DOS/MS-DOS | SOFTWARE: Patentin Release | #1.0, Version #1.25 (EPO)
                                                                                                                                                   TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                         NAME: Brown, Scott A. REGISTRATION NUMBER: 32,724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Genetics Institute, STREET: 87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genetics Institute, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                               SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                  Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 23; DB 9; 1
Pred, No. 4.1e+02;
; Mismatches 0;
                                                                                                               21:
                  . 4.1e+02;
thes 0;
                                                        DB 10;
                                                    Length 687;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 687;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

Conservative

0;

Mismatches

Indels

0;

Gaps

```
Query Match
Best Local Similarity
""" A Conservi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-927-180-23
; Sequence 23, Application US/09927180
; Patent No. US20020105364A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; MOLECULE TYPE: protein ; SEQUENCE DESCRIPTION: SEQ ID NO: US-09-927-180-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                               US-09-925-301-1012
                                                                                                                                                                                               Sequence 1012, Application US/09925301 Patent No. US20020052308A1 GENERAL INFORMATION:
CURRENT APPLICATION NUMBER: US/09/925,301
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05882
PRIOR FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
PRIOR FILING DATE: 1999-03-12
                                                                                                                                   APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins
FILE REFERENCE: PA106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 498-8224
TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 23:
                                                                                                                                                                                                                                                                                                                                                      547 NYDA 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       546 NYDA 549
                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 09/519,223 FILING DATE: <Unknown> ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Calcium Independent Phospholipase A2/B NUMBER OF SEQUENCES: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Jones, Simon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/09/927,180 FILING DATE: 09-Aug-2001 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 688 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Genetics Institute, STREET: 87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jim
                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 23; DB 10;
Pred. No. 4.1e+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Inc.
                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 688;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

```
PRIOR APPLICATION NUMBER: JP 99/377484
PRIOR FILING DATE: 1999-12-16
PRIOR APPLICATION NUMBER: JP 00/159162
PRIOR FILING DATE: 2000-04-07
PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR FILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
SOFTWARE: PATENTIN Ver. 3.0
SEQ ID NO 3507
LENGTH: 711
TYPE: PRT
                                                 Query Match
Best Local Similarity
Thehes 4; Conserve
Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids \text{US-}09\text{-}925\text{-}301\text{-}1012
                                                                                                                                   ; ORGANISM: Corynebacterium glutamicum US-09-738-626-3507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-738-626-3507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 3507, Application US/09738626 Publication No. US20020197605A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 1012
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                      CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: NAKAGAWA, SATOSHI
APPLICANT: MIZOGUCHI, HIROS
APPLICANT: ANDO, SEIKO
                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: IKEDA, MASATO
APPLICANT: OZAKI, AKIO
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: SITE
LOCATION: (153)
OTHER INFORMATION: Xaa
NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: SITE
LOCATION: (433)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION: (18)
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: (229)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 350 NYDA 353
34 NYDA 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity les 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                               1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/09/738,626 FILING DATE: 2000-12-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OCHIAI, KEIKU
YOKOI, HARUHIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATEISHI, NAOKO
SENOH, AKIHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HAYASHI, MIKIRO
                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xaa equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                 100.0%; Score 23; DB 9; L
100.0%; Pred. No. 4.2e+02;
... Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    any of the naturally occurring L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 10;
                                                                                              Length 711;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 708;
                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

RESULT 36 US-09-764-868-731

```
В
                                                                                                                                    : LENGTH: 739
: TYPE: PRT
: ORGANISM: Corynebacterium glutamicum
US-09-738-626-6988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-738-626-6988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: Xaa equals any of the naturally occurring US-09-764-868-731
                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR FILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
SOFTWARE: PATENTIN Ver. 3.0
SEQ ID NO 6988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PTZ32
CURRENT APPLICATION NUMBER: US/09/764,868
CURRENT EILING DATE: 2001-01-17
                                                                                                           Query Match
                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 6988, Application US/09738626
Publication No. US20020197605A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 731
LENGTH: 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 731, Application US/09764868 Patent No. US20020168711A1
                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: JP 99/377484
PRIOR FILING DATE: 1999-12-16
PRIOR APPLICATION NUMBER: JP 00/159162
PRIOR FILING DATE: 2000-04-07
                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: OZAKI, AKIO
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: NAKAGAWA, SATOSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Prior application data removed – refer to PALM or file wrapper NUMBER OF SEQ ID NOS: 1510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: SITE
LOCATION: (123)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
699 NYDA 702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    405 NYDA 408
                                                                                           Local Similarity
                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YOKOI, HARUHIKO
TATEISHI, NAOKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HAYASHI, MIKIRO
OCHIAI, KEIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SENOH, AKIHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ANDO, SEIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IKEDA, MASATO
                                                                    100.0%; Score 23; DB 9; llarity 100.0%; Pred. No. 4.4e+02; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 23; DB 9;
Pred. No. 4.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                     Length 739;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 721;
                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acids
                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
```

RESULT 38

```
; ORGANISM: Chlamydia US-09-841-132-386
                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Whiches 4; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; MOLECULE TYPE: protein ; SEQUENCE DESCRIPTION: SEQ ID NO: US-09-927-180-2
                                                                                                                                                                                                                                                                                                                                                            US-09-841-132-386
                                                                                       SOFTWARE: Fas
SEQ ID NO 386
LENGTH: 805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-927-180-2
Sequence 2, Application US/09927180
Patent No. US20020106364A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                       Sequence 386, Application US/09841132
Patent No. US20020061848A1
                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                       CURRENT APPLICATION NUMBER:
CURRENT FILING DATE: 2001-C
NUMBER OF SEQ ID NOS: 599
                                                                                                                                                                                          APPLICANT: Skeiky, Yasir A.W.

APPLICANT: Probst, Peter
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATMENT AND
TITLE OF INVENTION: DIAGNOSIS OF CHIAMYDIAL INFECTION
FILE REFERENCE: 210121.469C8
                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                   APPLICANT: Bhatia, Ajay
                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 752 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                              547 NYDA 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/927,180
FILING DATE: 09-Aug-2001 |
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 09/519,223
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Brown, Scott A.
REGISTRATION NUMBER: 32,724
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tang, Jim
TITLE OF INVENTION: Calcium
NUMBER OF SEQUENCES: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Jones, Simon
                                                                                                                          FastSEQ for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: Massachusetts COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87 CambridgePark
                                                   pneumoniae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                        Windows Version
                                                                                                                                                           MBER: US/09/841,132
2001-04-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (617) 498-8224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genetics Institute, Inc. CambridgePark Drive
 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23; Pred, No. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Independent Phospholipase A2/E
 23;
                                                                                                                          3.0/4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 10;
4.5e+02;
 10;
Length 805;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 752;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

100.0%; Pred. No. 4.8e+02; tive 0; Mismatches 0;

Indels

0,

0,

```
PRIOR APPLICATION UNMBER: 60/257,931
PRIOR FILING DATE: 2000-12-22
PRIOR APPLICATION UNMBER: 60/269,308
PRIOR FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 14110
SOFTWARE: FastSEQ for Windows Version 4.
SEQ ID NO 12769
LENGTH: 897
TYPE: PRT
                                                                                                                                                                                                                                                                             RESULT 41
US-09-801-368-272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Staphylococcus aureus US-09-815-242-12769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: 60/242,578
PRIOR FILING DATE: 2000-10-23
PRIOR APPLICATION NUMBER: 60/253,625
PRIOR FILING DATE: 2000-11-27
PRIOR APPLICATION NUMBER: 60/257,931
PRIOR FILING DATE: 2000-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 100. Matches 4; Conservative
                                                                                                                                                                                                                                    Sequence 272, Application US/09801368 Patent No. US20020128250A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 12769, Applicatio Patent No. US20020061569A1
                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: ELITRA.011A

CURRENT APPLICATION NUMBER: US/09/815,242

CURRENT FILING DATE: 2001-03-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: 60/206,848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Yamamoto, Robert T.

APPLICANT: Xu, H. Howard

TITLE OF INVENTION: Identification of Essential Genes

TITLE OF INVENTION: Prokaryotes
                                                                                                                                                                                                                      ENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 2000-05-23
PRIOR APPLICATION NUMBER: 60/207,727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Haselbeck, Robert
                                                                                 APPLICANT:
                                                                                                                                                                                            APPLICANT: Busby,
                                                            APPLICANT:
                                                                                                   APPLICANT:
                                          PPLICANT
                                                                                                                                                                                                                                                                                                                                                          117 NYDA 120
                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 100.0%; Score 23; DB 10; Local Similarity 100.0%; Pred. No. 5.3e+02; es 4; Conservative 0; Mismatches 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NYDA 4
||||
7 NYDA 10
                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
                                                                                                               Hecht, Peter
Holtzman, Doug
Madden, Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Carr, Grant J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Trawick, John D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wall, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ohlsen, Kari L.
Zyskind, Judith W.
                                                                                                                                                                                Cali, Brian
Sherman, Amir
                                                      Milne, Todd
No. US20020128250Alman,
                                                                                               Maxon, Mary
                                      Royer, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/09815242
                                                                                                                                                                                                Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 897;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
```

```
Query Match
Best Local Similarity
"hes 4; Conserve
                                                                                                              ; ORGANISM: Staphylococcus aureus US-09-815-242-5836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-815-242-5836; Sequence 5836; Application US/09815242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-801-368-272
                                                                                                                                                   ; SEQ ID NO 5836
; LENGTH: 1113
; TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                   Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No. US20020061569A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Summers, Eric TITLE OF INVENTION: Methods for Improving Secondary Metabolite Production in Fungi FILE REFERENCE: 109272.147 CURRENT APPLICATION NUMBER: US/09/801,368 CURRENT FILING DATE: 2001-03-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Xu, H. Howard
TITLE OF INVENTION: Identification of Essential Genes
TITLE OF INVENTION: Prokaryotes
FILE REFERENCE: ELLIRA.011A
CURRENT APPLICATION NUMBER: US/09/815,242
CURRENT FILING DATE: 2001-03-21
CURRENT FILING DATE: 2001-03-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 09/487,558
PRIOR FILING DATE: 2000-01-19
PRIOR APPLICATION NUMBER: US 60/160,587
PRIOR FILING DATE: 1999-10-20
NUMBER OF SEQ ID NOS: 440
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 2000-10-23
PRIOR APPLICATION NUMBER: 60/253,625
PRIOR FILING DATE: 2000-11-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                            SOFTWARE:
                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/269,308 PRIOR FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 2000-12-22
                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: 60/242,578
                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/207,727
                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/206,848 PRIOR FILING DATE: 2000-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/191,078 PRIOR FILING DATE: 2000-03-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT ORGANISM: Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      484 NYDA 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NYDA 4
1 NYDA 4
                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/257,931
                                                                                                                                                                                                            FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Haselbeck, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wall, Daniel
Trawick, John D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Carr, Grant J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zyskind, Judith W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ohlsen, Kari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yamamoto, Robert T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                       2000-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                     100.0%; Score 23; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                       Mismatches
                                                       6.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 10;
                                                                          DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 904;
                                                                        Length 1113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                   Gaps
                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

밁

```
Query Match
Best Local Similarity
"~+ ches 4; Conserv?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: PRT ; ORGANISM: Staphylococcus aureus US-09-815-242-12447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-815-242-12447
                                                                                                                                                                                                                                                                                                                                               Sequence 12814, Application US/09815242 Patent No. US20020061569A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/269,308
PRIOR FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 14110
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 12447
LENGTH: 1136
                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1 Patent No.
                                                                                                                                                                   APPLICANT:
APPLICANT:
CURRENT APPLICATION NUMBER: US/09/815,242
CURRENT FILING DATE: 2001-03-21
PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: 60/206,848
                                                                                              APPLICANT: Xu, H. Howard
TITLE OF INVENTION: Identification of Essential Genes
TITLE OF INVENTION: Prokaryotes
FILE REFERENCE: ELITRA.011A
                                                                                                                                                                                                                                          APPLICANT: Haselbeck, Robert
APPLICANT: Ohlsen, Kari L.
APPLICANT: Zyskind, Judith W.
APPLICANT: Wall, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: 60/206,848
PRIOR FILING DATE: 2000-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Xu, H. Howard
TITLE OF INVENTION: Identification of Essential Genes
TITLE OF INVENTION: Prokaryotes
FILE REFERENCE: ELITRA.011A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/207,727
PRIOR FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/815,242
CURRENT FILING DATE: 2001-03-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Haselbeck,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       110 NYDA 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/242,578
FILING DATE: 2000-10-23
APPLICATION NUMBER: 60/253,625
FILING DATE: 2000-11-27
APPLICATION NUMBER: 60/257,931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 2000-12-22
                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12447, Application US/09815242
b. US20020061569A1
                                                                                                                                                                                  Carr, Grant J.
Yamamoto, Robert T.
                                                                                                                                                                                                                          Trawick, John D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wall, Daniel
Trawick, John D.
Carr, Grant J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ohlsen, Kari L.
Zyskind, Judith W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yamamoto, Robert T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 23; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
```

```
Ş
                                                                                                     ; ORGANISM: Staphylococcus aureus US-09-815-242-5522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Staphylococcus aureus US-09-815-242-12814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-815-242-5522
                               Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                         SEQ ID NO 5522
LENGTH: 1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 5522, Application US/09815242
Patent No. US20020061569A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 14110
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 12814
LENGTH: 1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/257,931
PRIOR FILING DATE: 2000-12-22
PRIOR APPLICATION NUMBER: 60/269,308
PRIOR FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: 60/206,848
PRIOR FILING DATE: 2000-05-23
PRIOR APPLICATION NUMBER: 60/207,727
PRIOR FILING DATE: 2000-05-26
PRIOR FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Xu, H. Howard
TITLE OF INVENTION: Identification of
TITLE OF INVENTION: Prokaryotes
FILE REFERENCE: ELITRA.011A
CURRENT APPLICATION NUMBER: US/09/815,
CURRENT FILING DATE: 2001-03-21
PRIOR APPLICATION NUMBER: 60/191,078
PRIOR APPLICATION NUMBER: 60/191,078
                                                                                                                                                                                             SOFTWARE: FastSEQ
                                                                                                                                                                                                             NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Haselbeck, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/242,578
PRIOR FILING DATE: 2000-10-23
PRIOR APPLICATION NUMBER: 60/253,625
PRIOR FILING DATE: 2000-11-27
PRIOR APPLICATION NUMBER: 60/257,931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 2000-05-23
PRIOR APPLICATION NUMBER: 60/207,727
PRIOR FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            110 NYDA 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/
FILING DATE: 2000-10-23
                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/253,625 FILING DATE: 2000-11-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/269,308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carr, Grant J.
Yamamoto, Robert T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wall, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Trawick, John D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ohlsen, Kari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zyskind, Judith W.
                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                           for Windows Version 4.0
                                                                                                                                                                                                               2001-02-16
DS: 14110
                               100.0%; S
100.0%; F
tive 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                        60/242,578
                             Score 23; DB
Pred No. 7e+
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23; I
Pred! No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Essential Genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.0
                                              7e+02;
                                                             DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10;
6.7e+02;
                                                               Length 1179;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1136;
                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

Search completed: February 6, 2003, 11:39:47 Job time: 7.83333 secs

밁

•				
	* 0			
•				
property to the second	greet godgi far te saythe desta as	The state of the s	3 K =	- e _s r +
STORE ST				
		in the second of	被表示	R.
		·		
		*		
	%/A 0			
				* •
	1			
	y			
	() =			
	Marin .			
		and the state of t		
	*			
1. 12.27	to a section of the s		1 4 - v P	
				*
	4 8			
	*			
P D				5
**		* *	. (2, -1)	
				£ 00 t
	· ·		•	

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     옻
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq
Pending_Patents_AA_Main:*

1: /cgn2_6/ptodata/1/paa/US

2: /cgn2_6/ptodata/1/paa/US

4: /cgn2_6/ptodata/1/paa/US

5: /cgn2_6/ptodata/1/paa/US

6: /cgn2_6/ptodata/1/paa/US

6: /cgn2_6/ptodata/1/paa/US

8: /cgn2_6/ptodata/1/paa/US

8: /cgn2_6/ptodata/1/paa/US

9: /cgn2_6/ptodata/1/paa/US

10: /cgn2_6/ptodata/1/paa/US

11: /cgn2_6/ptodata/1/paa/US

11: /cgn2_6/ptodata/1/paa/US

12: /cgn2_6/ptodata/1/paa/US

13: /cgn2_6/ptodata/1/paa/US

14: /cgn2_6/ptodata/1/paa/US

15: /cgn2_6/ptodata/1/paa/US

16: /cgn2_6/ptodata/1/paa/US

17: /cgn2_6/ptodata/1/paa/US

18: /cgn2_6/ptodata/1/paa/US

19: /cgn2_6/ptodata/1/paa/US

20: /cgn2_6/ptodata/1/paa/US

21: /cgn2_6/ptodata/1/paa/US

23: /cgn2_6/ptodata/1/paa/US

23: /cgn2_6/ptodata/1/paa/US

24: /cgn2_6/ptodata/1/paa/US

25: /cgn2_6/ptodata/1/paa/US

26: /cgn2_6/ptodata/1/paa/US

27: /cgn2_6/ptodata/1/paa/US

26: /cgn2_6/ptodata/1/paa/US

27: /cgn2_6/ptodata/1/paa/US

28: /cgn2_6/ptodata/1/paa/US

29: /cgn2_6/ptodata/1/paa/US

20: /cgn2_6/ptodata/1/paa/US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT943-5
23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4569144 seqs, 644733110 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 nyda 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     February 6, 2003, 11:16:59; Search time 133.167 Seconds (without alignments)
19.366 Million cell updates/sec
                                 ://cgn2_6/ptodata/1/paa/USO96_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO96_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO96_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO81_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO81_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO84_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO84_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO84_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO86_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO86_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO86_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO89_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO89_COMB.pep:*
//cgn2_6/ptodata/1/paa/USO99_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.3 Coppright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1930
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

σ	5	4	ω	2	_	Result No.
23	23	23	23	23	23	Score
100.0	100.0	100.0	100.0	100.0	100.0	% Query Match
13	13	11	11		œ	Query Match Length DB ID
12	12	17	1	27	25	₩
US-08-826-516-164	US-08-826-516B-164	US-09-303-155A-23	PCT-US99-09466-23	US-60-291-149-85	5 US-10-145-415-85	Length DB ID
Sequence 164, App	Sequence 164, App	Sequence 23, Appl	Sequence 23, Appl	Sequence 85, Appl	Sequence 85, Appl	Description

	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	∞ ·	7
	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
		•		•	•		•		•	•	•	•		•	•		•	•			•	•	•	•	•	•		•		•	•	•	•		•	•		100.0	
	38	37	37	36	36	36	36	36	36	36	36	36	36	36	36	36	<u>ω</u> ω	ω ω	30	30	28	28	28	28	28	28	26	19	19	17	17	13	13	13	13	13	13	<u>1</u> 3	<u>1</u>
	27	27	27	27	26	26	26	26	26	26	25	25	25	25			27	27	16	16	26	26	26	26	25			25	16	27	25	25 5	25	25	18	18	18	28	18
ALIGNMENTS	60-192-746-17	-60-195-053-179	-60-170-373-339	-60-236-359-176	-203-139-277	-10-203-138-129	-10-203-137-289	-10-203-136-286	-10-203-135-275	-10-203-134-286	-10-182-998-126	-10-182-997-209	-10-182-995-223	-10-182-993-280	-09-864-761-358	-US01-00663-289	-60-169-867-6	-60-163-233-2412	-270-849B-180	-09-270-767-5683	-10-203-139-3198	-10-203-136-3	-203-135-3211	-10-203-134-3293	-10-182-993-3213	US-09-864-761-4389	08-486-277A-3	10-153-401	-09-293-533-6	-60-291-149	-10-145-415-6	0-185-050-1	-10-116-788B-	-10-116-788A-	-09-425-679E-	S-09-425-679D-	S-09-425-679C-	S-09-425-679B	US-09-425-679A-8
	Sequence 1760, Ap	1799,	3392,	17638,	27774,	12929,	28914,	equence 28648,	equence 27555,	equence 28641,	equence 12622,	equence 20978,	e 22331,	equence 28071,	се 35859,	quence 28914,		equence 2412,	w	56835,	31984,	32972,	32115,	10	321	Sequence	9,	equence 6,	σ.	equence 64	62	16,		6	6	6	6	י ס	

ALIGNMENTS

```
APPLICANT: Hammer, Philip Eugene
APPLICANT: Hall, Dwight Steven
APPLICANT: Ligon, James Madison
APPLICANT: Ligon, James Madison
APPLICANT: Ligon, James Madison
APPLICANT: Ligon, James Madison
APPLICANT: Pachlatko, Johannes Paul
APPLICANT: Zirkle, Ross Eric
TITLE OF INVENTION: Methods and Compositions for Making Emamectin
FILE REFERENCE: SYN-117 109846.312
CURRENT APPLICATION NUMBER: US/10/145.415
CURRENT FILING DATE: 2002-05-14
PRIOR APPLICATION NUMBER: US 60/291,149
PRIOR FILING DATE: 2001-05-16
NUMBER OF SEQ ID NOS: 105
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 85
LENGTH: 8
TYPE: PRI
                                                                                                              ; ORGANISM: Streptomyces tubercidicus US-10-145-415-85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-145-415-85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 85, Application US/10145415 GENERAL INFORMATION:
Query Match 100.0%; Score 23; DB 25; Best Local Similarity 100.0%; Pred. No. 4.2e+06; Matches 4; Conservative 0; Mismatches 0;
                                                     Length 8;
  Indels
0;
  Gaps
```

0

ρy

```
US-09-303-155A-23
                                                                                                                                             RESULT 4
                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                           ORGANISM: mouse
PCT-US99-09466-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; TYPE: PRT ; ORGANISM: Streptomyces tubercidicus US-60-291-149-85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCT-US99-09466-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 3
Sequence 23, Application US/09303155A
GENERAL INFORMATION:
APPLICANT: Baufu Ni
APPLICANT: Bill N.C. Sun
APPLICANT: Cedily R.Y. Sun
TITLE OF INVENTION: G-CSF Receptor Agonist Antibodies and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 23
LENGTH: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Ligon, James
APPLICANT: Ligon, James
APPLICANT: Hill, D. Steven
APPLICANT: Molnar, Istvan
CURRENT FILE REFERENCE: SYN-010P 109846.126
CURRENT APPLICATION NUMBEE: US/60/291,149
CURRENT FILING DATE: 2001-05-16
NUMBER OF SEQ ID NOS: 93
SOFTWARE: PATENTIAN VERSION 3.0
LENGTH: 8
TWORK- Non
                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 23, Application PC/TUS9909466A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S-60-291-149-85
Sequence 85, Application US/60291149
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: PCT/US99/09466A CURRENT FILING DATE: 1999-04-30 EARLIER APPLICATION NUMBER: 60/083,575 EARLIER FILING DATE: 1998-04-30 NUMBER OF SEQ ID NOS: 27 SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Baufu Ni
APPLICANT: Bill N.C. Sun
APPLICANT: Cecily R.Y. Sun
TITLE OF INVENTION: G-CSF receptor agonist antibodies
TITLE OF INVENTION: screening method therefor
FILE REFERENCE: 98-3
                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                               5 NYDA 8
                                                                                                                                                                                                                                  1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4;
                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                              100.0%; Score 23; DB 1; 100.0%; Pred. No. 1.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 23; DB 27; 100.0%; Pred. No. 4.2e+06;
                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                 Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 8;
                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

DЪ

```
; STRANDEDNESS:
; TOPOLOGY: unk
; MOLECULE TYPE:
US-08-826-516B-164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-826-516B-164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
"~+~hes 4; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: mouse US-09-303-155A-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: F:
SEQ ID NO 23
LENGTH: 11
TYPE: PRT
                                  Matches
                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 164, Application US/08826516B GENERAL INFORMATION:
                                                                                                                                                                                                              TELEPHONE: (212) 790-9090
TELEFAX: (212) 896-8864/9741
INFORMATION FOR SEQ ID NO: 164:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/303,155A CURRENT FILING DATE: 1999-04-30 PRIOR APPLICATION NUMBER: 60/083,575 PRIOR FILING DATE: 1998-04-30 NUMBER OF SEQ ID NOS: 27
                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: FILE REFERENCE: 98-3
                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 11(
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
TELEPAY.
                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/826,516B
FILING DATE: 03-APR-1997
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Pirozzi, Gregorio
APPLICANT: Kay, Brian K.
APPLICANT: Fowlkes, Dana M.
TITLE OF INVENTION: IDENTIFICATION AND ISOLATION OF NOVEL
TITLE OF INVENTION: POLYPEPTIDES HAVING WW DOMAINS AND METHODS OF USING SAME
NUMBER OF SEQUENCES: 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                Local Similarity
                                                                                                                                                                                                                                                                                                          NAME: MISROCK, S. LESLIE REGISTRATION NUMBER: 18,8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: United States ZIP: 10036-2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 1155 AV
CITY: New York
STATE: New York
                                                                                                                                                                                      LENGTH:
1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5 NYDA 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NYDA 4
                                                                                                                                                                    amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FastSEQ for Windows Version
                                                                                                                                                                                     13 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1155 Avenue of the Americas
                                Conservative
                                                                                                                                    unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pennie & Edmonds LLP
                                                                                                                  peptide
                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Screening Method Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                              0;
                                                                                                                                                                                                                                                                                          1101-208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                            Score 23; DB 12
Pred. No. 2e+02;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23; DB 17;
Pred. No. 1.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.0
                                                           DB 12; Length 13;
                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
TOPOLOGY: unknown;

MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 164:
US-08-826-516-164
                                                                                                                                                                                                                                                                                                                                                   RESULT 7
US-09-425-679A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                            US-09-425-679A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-826-516-164
                                                         SEQ ID NO 8
LENGTH: 13
TYPE: PRT
ORGANISM: Equine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 164, Application US/08826516D GENERAL INFORMATION:
APPLICANT: Pirozzi, Gregorio
                                                                                                                                                                                                                                                                                                           Sequence 8, Application US/09425679A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
    Query Match
                                                                                                                                              APPLICANT: McDonald, Thomas L.
APPLICANT: Weber, Annika
APPLICANT: Weber, Annika
TITLE OF INVENTION: Serum Amyloid A Isoform from Colostrum
FILE REFERENCE: Colostrum SAA
CURRENT APPLICATION NUMBER: US/09/425,679A
CURRENT FILING DATE: 1999-10-22
NUMBER OF SEO ID NOS: 11
NUMBER OF SEO ID NOS: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEX: 66141 PENNIE INFORMATION FOR SEQ ID NO: 164: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                      7 NYDA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
COMPUTER: PATENTIAL PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/826,516D
FILING DATE: 03-Apr-1997
CLASSIFICATION: <Unknown>
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: MISROCK, S. LESLIE
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 1101-208-999
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: PENNIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fowlkes, TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (212) 790-9090
TELEFAX: (212) 896-8864/9741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 10036-2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: PENNIE & EDMONDS LLP STREET: 1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brian K
    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IDENTIFICATION AND ISOLATION OF NOVEL POLYPEPTIDES HAVING WW DOMAINS AND ME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dana M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23; DB
Pred. No. 2e+
0; Mismatches
    Score 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2e+02;
    DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 12; Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   METHODS OF USING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
```

```
; LENGTH: 13
; TYPE: PRT
; ORGANISM: Equine
US-09-425-679B-8
                                                                                                                                Бр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                 US-09-425-679D-6
                                                                                 RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 8
US-09-425-679B-8
                                                                                                                                                                                                                                                              US-09-425-679C-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-425-679C-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 9
Sequence 6, Application US/09425679D GENERAL INFORMATION:
APPLICANT: MCDOnald, Thomas L.
APPLICANT: Weber, Annika L.
                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 11
SOFTWARE: PatentIn version 3.0
SEQ ID NO 6
LENGTH: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 6, Application US/09425679C GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 8, Application US/09425679B
GENERAL INFORMATION:
APPLICANT: McDonald, Thomas L.
APPLICANT: Weber, Annika
                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 100.0%;
Matches 4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Serum Amyloid A Isoform from Colostrum FILE REFERENCE: Colostrum SAA CURRENT APPLICATION NUMBER: US/09/425,679B CURRENT FILING DATE: 1999-10-22 NUMBER OF SEQ ID NOS: 11
                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 60/218,482 PRIOR FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/425,679C CURRENT FILING DATE: 1999-10-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: McDonald, Thomas
APPLICANT: Weber, Annika
TITLE OF INVENTION: Serum Amyloid A Isoform from Colostrum
FILE REFERENCE: UNMC 63142
                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 60/218,611 PRIOR FILING DATE: 2000-07-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Board of Regents of the University of Nebraska Medical Center
                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Equus caballus
                                                                                                                                                              1 NYDA 4
                                                                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 NYDA 5
                                                                                                                                NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                            100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 2e+02;
                                                                                                                                                                                                             Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23; DB 18
Pred. No. 2e+02;
                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                           2e+02;
                                                                                                                                                                                                                            DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                0;
                                                                                                                                                                                                                            Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                              Gaps
                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
US-10-116-788A-6
                                                                                                                                                                                                                                                                                                            RESULT 12
                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-425-679E-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-425-679E-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-425-679D-6
                                                                                                                                                                                  Sequence 6, Application US/10116788A GENERAL INFORMATION:
APPLICANT: McDonald, Thomas L.
APPLICANT: Larson, Marilyn A.
APPLICANT: Weber, Annika
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 6, Application US/09425679E GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 6
CURRENT APPLICATION NUMBER: US/10/116,788A CURRENT FILING DATE: 2002-06-10 PRIOR APPLICATION NUMBER: 09/425,679 PRIOR FILING DATE: 1999-10-22 PRIOR APPLICATION NUMBER: 60/218,482 PRIOR FILING DATE: 5000-07-14 PRIOR APPLICATION NUMBER: 60/218,611 PRIOR APPLICATION NUMBER: 60/218,611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                          APPLICANT: Weber, Annika
TITLE OF INVENTION: Genomic Mammary Amyloid A Sequence
FILE REFERENCE: P04557US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Weber, Annika L.
TITLE OF INVENTION: Serum Amyloid A Isoform from Colostrum
FILE REPERENCE: UNMC 63142
CURRENT APPLICATION NUMBER: US/09/425,679E
CURRENT FILING DATE: 1999-10-22
PRIOR APPLICATION NUMBER: US 60/218,482
PRIOR FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 60/218,611
PRIOR FILING DATE: 2000-07-17
NUMBER OF SEQ ID NOS: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: US 60/218,482
PRIOR FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: US 60/218,611
PRIOR FILING DATE: 2000-07-17
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: McDonald, Thomas L. APPLICANT: Weber, Annika L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 13
TYPE: PRT
ORGANISM: Equus caballus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/425,679D CURRENT FILING DATE: 1999-10-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: Serum Amyloid A Isoform from Colostrum FILE REFERENCE: UNMC 63142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Equus caballus
                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                     2 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 NYDA 5
                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 23; DB 18 llarity 100.0%; Pred. No. 2e+02; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 23; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

```
RESULT 14
US-10-185-050-164
; Sequence 164, Application US/10185050
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                      VΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-116-788B-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
US-10-116-788B-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: PRT; ORGANISM: Equus caballus US-10-116-788A-6
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:

APPLICANT: Board Of Regents of the University of Nebraska Medical Center

APPLICANT: McDonald, Thomas L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 34
SOFTWARE: PatentIn version
SEQ ID NO 6
LENGTH: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 09/425,679
PRIOR FILING DATE: 1999-10-22
PRIOR APPLICATION NUMBER: 60/218,482
PRIOR FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 2000-07-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/116,788B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Weber, Annika
TITLE OF INVENTION: Genomic Mammary Amyloid A Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 13
TYPE: PRT
ORGANISM: Equus caballus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                            2 NYDA
                                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 NYDA 5
                       ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                            NUMBER OF SEQUENCES: 233

CORRESPONDENCE ADDRESS:
ADDRESSEE: PENNIE & EDMOND'S LLP
APPLICAS
                                                                                                                                     TITLE OF INVENTION: IDENTIFICATION AND ISOLATION OF NOVEL
POLYPEPTIDES HAVING WW DOMAINS AND METHODS OF USING SAME
                                                                                                                                                                                                                                    APPLICANT: Pirozzi, Gregorio
                                                                                     CITY: New York
STATE: New York
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                         COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/10116788B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Larson, Marilyn A.
Weber, Annika
                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P04557US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/218,611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3.1
                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                  Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 23; DB 25
Pred. No. 2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                  No.
                                                                                                                                                                                                                                                                                                                                                                                                                  2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                              DB 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25;
                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                             Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
US-60-291-149-64
; Sequence 64, Application US/60291149
; GENERAL INFORMATION:
                                                                                                                                                                                                                                        Вb
                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 15
US-10-145-415-64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-185-050-164
                                                                                                                        RESULT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Streptomyces tubercidicus US-10-145-415-64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 60/291,149
PRIOR PILING DATE: 2001-05-14
PRIOR FILING DATE: 2001-05-16
NUMBER OF SEQ ID NOS: 105
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 64
LENGTH: 17
TYPES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 64, Application US/10145415 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Zirkle, Ross Eric TITLE OF INVENTION: Methods and Compositions for Making Emamectin FILE REFERENCE: SYN-117 109846.312 CURRENT APPLICATION NUMBER: US/10/145,415 CURRENT FILING DATE: 2002-05-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Buckel, Thomas Gunter
APPLICANT: Hammer, Philip Eugen
APPLICANT: Hill, Dwight Steven
APPLICANT: Ligon, James Madison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEX: 66141 PENNIE INFORMATION FOR SEQ ID NO: 164: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 100.0%; indicated the second similarity 100.0%; items of the second secon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 NYDA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: unknown
MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 164:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 1101-208-999
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/826,516 FILING DATE: 03-Apr-1997 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                    NYDA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/10/185,050 FILING DATE: 28-Jun-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hammer, Philip Eugene
Hill, Dwight Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (212) 790-9090
TELEFAX: (212) 896-8864/9741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: MISROCK, S. LESLIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ligon, James Madison
Molnar, Istvan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pachlatko, Johannes Paul
                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 23; DB 25; llarity 100.0%; Pred. No. 2.6e+02; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρ
                                                                     US-09-293-533-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-60-291-149-64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-293-533-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 6, Applicati
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
Matches 4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: P
                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Hill, D. Steven
APPLICANT: Molnar, Istvan
TITLE OF INVENTION: Methods and Compositions for Making Emamectin
FILE REFERENCE: SYN-010P 109846.126
CURRENT APPLICATION NUMBER: US/60/291,149
CURRENT FILLING DATE: 2001-05-16
NUMBER OF SEQ ID NOS: 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Ligon, James APPLICANT: Pachlatko, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 17
TYPE: PRT
ORGANISM: Streptomyces tubercidicus
                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 94304 1018
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Foon, Kenneum APPLICANT: Foon, Kenneum APPLICANT: Chatterjee, Sunil K.
TITLE OF INVENTION: MONOCLONAL ANTIBODY 1A7 AND USE FOR THE TITLE OF INVENTION: TREATMENT OF MELANOMA AND SMALL CELL CA
                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 30 TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 813-5600
                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 66
CORRESPONDENCE ADDRESSE: MORRISON & FOERSTER
ADDRESSEE: MORRISON & FOERSTER
STREET: 755 PAGE MILL ROAD
                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Schiff, J. Michael
REGISTRATION NUMBER: 40,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Chatterjee, Malaya
                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA: APPLICATION NUMBER:
                     Local Similarity
                                                                                                                                                                                       TELEFAX: (415
TELEX: 706141
                                                                                                                       TYPE:
                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: PALO ALTO
                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                       TOPOLOGY:
                                                                                                                                         LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9 NYDA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4;
                                                                                                                   amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PatentIn version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/09293533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CA
                                                                                                                                       19 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 23; DB 27; ilarity 100.0%; Pred. No. 2.6e+02; Conservative 0; Mismatches 0;
100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                         (415) 494-0792
                                                                                       linear
                                                                                                   single
                                                                                                                                                                                                                                                                                                                                                US/08/752,844
                                                                                                                                                                                                                                                                                                                                                                                                                  us/09/293,533
                                                                                                                                                                                                                                                                           40,253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Paul
                                                                                                                                                                                                                                                             30414-20002.21
     0
                   Score 23; DB 16
Pred. No. 3e+02;
     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MELANOMA AND SMALL CELL CARCINOMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Version #1.30
                                   DB 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 17;
                                   Length 19;
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

Q

```
US-08-486-277A-39
US-08-486-277A-39
Sequence 39, Application US/08486277A
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                 ; SEQUENCE DESCRIPTION: SEQ ID NO: US-10-153-401-6
                                                                                                                                                                                 В
                                                                                                                                                                                                                 QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 18
US-10-153-401-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 6, Application US/10153401 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 6: SEQUENCE CHARACTERISTICS: LENGTH: 19 amino acids
                                                  APPLICANT:
              APPLICANT:
                                   APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 09/293,533
FILING DATE: 1999-04-15
APPLICATION NUMBER: US 08/372,676
FILING DATE: 1995-01-17
APPLICATION NUMBER: US 08/591,196
FILING DATE: 1996-01-16
ATTORNEY/AGENT INFORMATION:
NAME: Catherine M. Polizzi
REGISTRATION NUMBER: 40,130
REPERENUE/DOCKET NUMBER: 304142000202
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 813-5600
                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                  1 NYDA 4
                                                                                                                                                                               2 NYDA 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON & FOERSTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chatterjee, Sunil K.
TITLE OF INVENTION: MONOCLONAL ANTIBODY 1A7 AND USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Chatterjee, Malaya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                     4;
                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/10/153,401 FILING DATE: 27-Aug-2002 CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (415) 494-0792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: PALO ALTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 755 PAGE MILL ROAD
     Heinemann Ph.D., Stephen Boulter Ph.D., James R. Hollmann Ph.D., Michael
                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94304-1018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Foon,
                                                                                                                                                                                                                                                 100.0%; s
100.0%; s
htive 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kenneth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TREATMENT OF MELANOMA AND
                                                                                                                                                                                                                                                              Score 23; DB 25
Pred. No. 3e+02;
                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                 DB 25; Length 19;
                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ND USE FOR THE
SMALL CELL CARCINOMA
                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                             0;
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-864-761-43895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; MOLECULE TYPE:
; FRAGMENT TYPE:
US-08-486-277A-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 43895, Appl
GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                  TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FO TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY FILE REFERENCE: AGOMICA-X-1 CURRENT APPLICATION NUMBER: US/09/864 761 CURRENT FILING DATE: 2001-05-23 PRIOR APPLICATION NUMBER: US 60/180, 312 PRIOR APPLICATION NUMBER: US 60/180, 312 PRIOR APPLICATION NUMBER: US 60/207, 456 PRIOR FILING DATE: 2000-05-26 PRIOR FILING DATE: 2000-05-26 PRIOR FILING DATE: 2000-08-03 PRIOR APPLICATION NUMBER: US 09/632, 366 PRIOR APPLICATION PRIOR APPLIC
                                                                                                                           PRIOR APPLICATION NUMBER: US 60/236,359 PRIOR FILING DATE: 2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Penn, Sharron G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Reiter Ph.D., Stephen E.
REGISTRATION NUMBER: 31,192
REFERENCE/DOCKET NUMBER: P41 9987
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 546-1995
TELEFAX: (619) 546-9392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/01
FILING DATE: 06-JUN-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Jensen Ph.D., Jan E.
TITLE OF INVENTION: GLUTAMATE RECEPTOR COMPOSITIONS AND METHODS
NUMBER OF SEQUENCES: 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                          APPLICATION NUMBER: PCT/US01/00666 FILING DATE: 2001-01-30
                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            h 100.0%;
Similarity 100.0%;
4; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90071-2921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : 26 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Los Angeles
California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rank, David R.
Hanzel, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              444 So.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/0986476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pretty, Schroeder, Brueggemann & Clark
4 So. Flower St., Suite 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wensheng
2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              single
                              PCT/US01/00667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/486,277A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 39:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 23; DB
Pred. No. 4.2
D; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     e 23; Db.,
No. 4.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

APPLICATION NUMBER: PCT FILING DATE: 2001-01-30

APPLICATION NUMBER: PCT/US01/00664 FILING DATE: 2001-01-30

PCT/US01/00669

```
US-10-182-993-32131
; Sequence 32131, Application US/10182993
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                             CURRENT FILING DATE: 2002-08-02

PRIOR APPLICATION NUMBER: US 60/180,312

PRIOR FILING DATE: 04 February 2000 (04.02.00)

PRIOR APPLICATION NUMBER: US 60/207,456

PRIOR FILING DATE: 26 May 2000 (26.05.00)

PRIOR APPLICATION NUMBER: US 09/632,366

PRIOR FILING DATE: 03 August 2000 (03.08.00)

PRIOR APPLICATION NUMBER: GB 24263.6

PRIOR APPLICATION NUMBER: US 60/236,359

PRIOR APPLICATION NUMBER: US 60/236,359

PRIOR APPLICATION NUMBER: US 60/236,359

PRIOR APPLICATION NUMBER: US 60/236,359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
OTHER INFORMATION: E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                 FILE REFERENCE: PB 0004 WO 2
CURRENT APPLICATION NUMBER: US/10/182,993
CURRENT FILING DATE: 2002-08-02
                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN BRAIN
                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Molecular Dynamics, Inc. APPLICANT: Penn, Sharron G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EQ ID NO 43895
LENGTH: 28
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 2001-01-29
NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NYDA 4
FILING DATE: 27 September APPLICATION NUMBER: US 60/FILING DATE: 21 September
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 09/608,408 FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US01/00670
FILING DATE: 2001-01-30
APPLICATION NUMBER: US 60/234,687
FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 09/774,203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/US01/00661 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US01/00668 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/US01/00665
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: PCT/US01/0066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NYDA 10
                                                                                                                                                                                                                                                                                                                                                                                                     Hanzel, David
Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Penn, Sharron (
Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 23; DB 22; ilarity 100.0%; Pred. No. 4.5e+02; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HE MAP TO AC005083.1

EXPRESSED IN LUNG,
EXPRESSED IN FETAL
EXPRESSED IN BARIN
EXPRESSED IN ADULT
EXPRESSED IN BONE 1
                                                                                                                                                                                                                                                                                                                                                                                                                              David K.
US 60/234,687
:ember 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LUNG, SIGNAL = 0.48
FETAL LIVER, SIGNAL = 0.72
BRAIN, SIGNAL = 0.58
ADULT LIVER, SIGNAL = 0.43
BONE MARROW, SIGNAL = 0.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

뫄

7

NYDA 10

RESULT 23 US-10-203-135-32115

```
Qy
                                                                                                                                                                                                                                                    ; OTHER INFORMATION: EXPRESSED IN BONE MARROW, US-10-203-134-32932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL US-10-182-993-32131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 04 February 2000 (04.02.00)
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 26 May 2000 (26.05.00)
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 03 August 2000 (03.08.00)
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR FILING DATE: 27 September 2000 (27.09.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-203-134-32932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 38628
SOFTWARE: Molecular Dynamics
SEQ ID NO 32932
LENGTH: OF THE PROPERTY OF THE PROPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 30 June 2000 (30.06.00)
NUMBER OF SEQ ID NOS: 37811
SOFTWARE: Molecular Dynamics Sequence Listing Engine
SEQ ID NO 32131
LENGTH: 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                        Matches
                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FO
TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN BONE MARROW
FILE REFERENCE: PB 0004 WO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: CURRENT FILING DATE: 2002-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Molecular Dynamics,
                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                         FEATURE: OTHER INFORMATION: MAP TO AC005083.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: MAP TO AC005083.1 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH: 28
1 NYDA 4
                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity les 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7 NYDA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 21 September 2000 (21.09.00) APPLICATION NUMBER: US 09/608,408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32932, Application US/10203134
                                                                                                        4,
                                                                                             100.0%; ilarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2002-08-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>م</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000 (30.06.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/10/203,134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence Listing Engine
                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                           Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23; DB 25;
Pred. No. 4.5e+02;
                                                                                                     Mismatches
                                                                                                                                        4.5e+02;
                                                                                                                                                                          DB 26;
                                                                                                                                                                                                                                                                                           SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.58
                                                                                                                                                                       Length 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
US-10-203-136-32972; Sequence 32972; A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/203,135
CURRENT ETLING DATE: 2002-08-02
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 04 February 2000 (04.02.00)
PRIOR FILING DATE: 04 February 2000 (04.02.00)
PRIOR FILING DATE: 05 6May 2000 (26.05.00)
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 90/632,366
PRIOR FILING DATE: 03 August 2000 (03.08.00)
PRIOR FILING DATE: 03 October 2000 (03.10.00)
PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR FILING DATE: 27 September 2000 (27.09.00)
PRIOR APPLICATION NUMBER: US 60/234,887
PRIOR FILING DATE: 21 September 2000 (21.09.00)
PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 30 June 2000 (30.06.00)
NUMBER: US 09/608,408
PRIOR FILING DATE: 30 June 2000 (30.06.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                     TITLE OF INVENTION: ANALYSIS OF GENE EXPI-
FILE REFERENCE: PB 0004 WO 3
CURRENT APPLICATION NUMBER: US/10/203,136
CURRENT FILING DATE: 2002-08-02
PRIOR APPLICATION NUMBER: US 60/180,312
                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN ADULT LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Molecular Dynamics Sequence Listing Engine SEQ ID NO 32115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: EXPRESSED IN LUNG, -10-203-135-32115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Molecular Dynamics, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN LUNG
FILE REFERENCE: PB 0004 WO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence 32115, Application US/10203135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Molecular Dynamics, APPLICANT: Penn, Sharron G. APPLICANT: Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 37012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
OTHER INFORMATION: MAP TO AC005083.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 28
                                                    IOR FILING DATE: 04 February 2000 (04.02.00)
OR APPLICATION NUMBER: US 60/207,456
COR FILING DATE: 26 May 2000 (26.05.00)
OR APPLICATION NUMBER: US 09/632,366
OR FILING DATE: 03 August 2000 (03.08.00)
OR APPLICATION NUMBER: GB 24263.6
OR FILING DATE: 03 October 2000 (03.10.00)
OR APPLICATION NUMBER: US 60/236,359
OR FILING DATE: 27 September 2000 (27.09.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 NYDA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Penn, Sharron G.
Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hanzel, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/10203136
          21 September
                                                 27 September 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                          US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
(21.09.00)
                                                 (27.09.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIGNAL =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

```
В
                                                                                                                                           ; OTHER INFORMATION: EXPRESSED IN FETAL US-10-203-139-31984
                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 26 May 2000 (26.05.00)
PRIOR FILING DATE: 03 August 2000 (03.08.00)
PRIOR FILING DATE: 03 October 2000 (03.10.00)
PRIOR FILING DATE: 03 October 2000 (03.10.00)
PRIOR PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR PRIOR PRIOR DATE: 27 September 2000 (27.09.00)
PRIOR FILING DATE: 21 September 2000 (21.09.00)
PRIOR FILING DATE: 21 September 2000 (21.09.00)
PRIOR FILING DATE: 21 September 2000 (21.09.00)
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR FILING DATE: 21 September 2000 (21.09.00)
PRIOR APPLICATION NUMBER: US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-203-139-31984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; OTHER INFORMATION: EXPRESSED IN ADULT LIVER, US-10-203-136-32972
                                                                                    Query Match
Best Local :
                                                                     Matches
                                                                                                                                                                                                                                                                     SEQ ID NO 31984
LENGTH: 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                 SOFTWARE: Molecular Dynamics Sequence Listing Engine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 31984,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Molecular Dynamics Sequence Listing SEQ ID NO 32972
                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 30 June : NUMBER OF SEQ ID NOS: 37156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FO
TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN FETAL LIVER
FILE REFERENCE: PB 0004 WO 4
                                                                                                                                                                                                             ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/203,139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                            OTHER INFORMATION: MAP TO ACO05083.1
                                                                                                                                                                                                                                                      TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Molecular Dynamics,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PKIOR FILING DATE: 30 June NUMBER OF SEQ ID NOS: 38578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US PRIOR FILING DATE: 30 June 20
                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
OTHER INFORMATION: MAP TO AC005083.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH:
 7
                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7 NYDA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 NYDA 4
NYDA
                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 4; Conserv
 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hanzel, David K.
Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Penn, Sharron
Rank, David R
                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/10203139
                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                     2000 (30.06.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JS 09/608,408
2000 (30,06.00)
                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                  Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
Pred.
                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23;
No.
                                                                                                                                                        LIVER, SIGNAL
                                                              DB 26;
. 4.5e+02;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Engine
                                                                                                Length 28;
                                                                Indels
                                                                                                                                                          li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                      0.72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28
                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

RESULT 26

```
US-09-270-849B-180383

Sequence 180383, Application US/09270849B

GENERAL INFORMATION:

APPLICANT: Swimmer et al.
                                                                                                                                                                                                 RESULT 28
US-60-163-233-2412
US-60-163-233-2412
; Sequence 2412, Application US/60163233
; GENERAL INFORMATION:
APPLICANT: Bonazzi, Vivien
; TITLE OF INVENTION: ISOLATED HUMAN DRUG TARGET PROTEINS,
TITLE OF INVENTION: AND USES THEREOF
; TITLE OF INVENTION: AND USES THEREOF
; FILE REFERENCE: CL000133
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-270-767-56835
                                      ; ORGANISM: Human US-60-163-233-2412
                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Description of Artificial Sequence: US-09-270-849B-180383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/270,849B
CURRENT FILING DATE: 1999-03-17
NUMBER OF SEQ ID NOS: 195450
SOFTWARE: PATENTIN VET. 2.0
SEQ ID NO 180383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Homburger et al.
APPLICANT: Homburger et al.
TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster
FILE REFERENCE: File Reference: 7326-094
CURRENT APPLICATION NUMBER: US/09/270,767
CURRENT FILING DATE: 1999-03-17
NUMBER OF SEQ ID NOS: 62517
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 56835
LENGTH: 30
TYPE: PRT
                                                                      NUMBER OF SEQ ID NOS: 4426
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 2412
LENGTH: 33
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 56835,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Drosophila melanogaster -09-270-767-56835
                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/60/163,233 CURRENT FILING DATE: 1999-11-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Insect genome survey devices FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                       8 NYDA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8 NYDA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09270767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 23; DB 16;
Pred. No. 4.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 23;
Pred. No.
   Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.9e+02;
 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 16;
                                                                                                                                                                                                                                       ENCODING HUMAN DRUG TARGET PROTEINS
   27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
CURRENT FILING DATE: 2001-01-30

PRIOR APPLICATION NUMBER: US 60/180,312

PRIOR PILING DATE: 04 February 2000 (04.02.00)

PRIOR PILING DATE: 06 May 2000 (26.05.00)

PRIOR PILING DATE: 26 May 2000 (26.05.00)

PRIOR PILING DATE: 26 May 2000 (26.05.00)

PRIOR PILING DATE: 27 September 2000 (03.08.00)

PRIOR PILING DATE: 03 October 2000 (03.10.00)

PRIOR PILING DATE: 03 October 2000 (27.09.00)

PRIOR PILING DATE: 27 September 2000 (27.09.00)

PRIOR PILING DATE: 21 September 2000 (27.09.00)

PRIOR PILING DATE: 21 September 2000 (21.09.00)

PRIOR PILING DATE: 31 September 2000 (21.09.00)

PRIOR PILING DATE: 30 June 2000 (30.06.00)

NUMBER OF SEQ ID NOS: 38837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Human US-60-169-867-6162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-60-169-867-6162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT-US01-00663-28914
                                                                                                                   SOFTWARE: Molecular Dynamics Sequence Listing Engine SEQ ID NO 28914
LENGTH: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 6162
LENGTH: 33
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Bonazzi, Vivien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 28914, Application PC/TUS0100663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 6162, Application US/60169867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: ISOLATED HUMAN DRUG TARGET PROTEINS,
TITLE OF INVENTION: NUCLEIC ACID MOLECULES ENCODING HUMAN DRUG TARGET PROTEINS,
TITLE OF INVENTION: AND USES THEREOF
FILE REFERENCE: CL000160
CURRENT FILING DATE: 1999.12-09
CURRENT FILING DATE: 1999.12-09
CONTRENT FILING DATE: 1999.12-09
CONTRENT FILING DATE: 1999.12-09
CONTRENT FILING DATE: 1999.12-09
CONTRENT FILING DATE: 1999.12-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FO TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN PLACENTA FILE REFERENCE: PB 0004 WO 7 CURRENT APPLICATION NUMBER: PCT/US01/00663 CURRENT FILING DATE: 2001-01-30 CURRENT FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Molecular Dynamics,
FEATURE:
OTHER INFORMATION: MAP TO ACO10732.1
OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 3.4
                                                                       ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12 NYDA 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12 NYDA 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity les 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Penn, Sharron G.
Rank, David R.
Hanzel, David K.
Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 5.4e+02; ); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: EST_HUMAN HIT: AW403965.1, PCT-US01-00663-28914
                                                                                                                                                               NUMBER OF SEQ ID NOS: 49117
SOFTWARE: Annomax Sequence Listing Engine vers.
SEQ ID NO 35859
LENGTH: 36
                      OTHER INFORMATION: MOTHER INFORMATION: EOTHER INFORMATION: EOTHER INFORMATION: E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 35859, App. GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 2000-02-07
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 2000-08-03
PRIOR FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -09-864-761-35859
                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/864,761 CURRENT FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/180,312 PRIOR FILING DATE: 2000-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                       ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Penn, Sharron G.
                                                                                                                                              TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30 NYDA 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NYDA 4
                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 60/234,687 FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: PCT/US01/00661 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00664
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: GB 24263.6
FILING DATE: 2000-10-04
APPLICATION NUMBER: US 60/236,359
FILING DATE: 2000-09-27
                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: PCT/US01/00668 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/US01/00669 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US01/00666
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: PCT/US01/00667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09864761
: MAP TO ACO10732.1
: EXPRESSED IN PLACENTA, S
: EXPRESSED IN HEART, SIGN
: EXPRESSED IN LUNG, SIGNA
: EXPRESSED IN BONE MARRON
                                                                                                                                                                                                                                                                                                                                                                                                  2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
HEART, SIGNAL = 1.3
LUNG, SIGNAL = 8.4
BONE MARROW, SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                         SIGNAL =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EVALUE 2.00e-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROBES USEFUL FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                 B
                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ωy
```

```
RESULT 33
US-10-182-995-22331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILLING DATE: 04 February 2000 (04.02.00)
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILLING DATE: 26 May 2000 (26.05.00)
PRIOR PRIOR PLICATION NUMBER: US 09/632,366
PRIOR FILLING DATE: 03 AUGUST 2000 (03.08.00)
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR FILLING DATE: 03 October 2000 (03.10.00)
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR FILLING DATE: 27 September 2000 (27.09.00)
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILLING DATE: 30 June 2000 (30.06.00)
PRIOR FILLING DATE: 30 June 2000 (30.06.00)
                                                                                                                                                                                                                                                             ; OTHER INFORMATION: EST_HUMAN HIT: AW403965.1, EVALUE 2.00e-13 US-10-182-993-28071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-182-993-28071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-864-761-35859
Sequence 22331, Application US/10182995
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Molecular Dynamics Sequence Listing Engine SEQ ID NO 28071
LENGTH: 36
                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 4
                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 37811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT FILING DATE: 2002-08-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN BRAIN FILE REFERENCE: PB 0004 WO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Molecular Dynamics,
                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER
OTHER
OTHER
                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 1.7
                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER
                                                                                                             30 NYDA 33
                                                                                                                                                                                                     Local Similarity
                                                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30 NYDA 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hanzel, David K.
Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Penn, Sharron (Rank, David R.
                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                       MAP TO AC010732.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EXPRESSED IN FETAL LIVER, SIGNAL = 1.9
EXPRESSED IN ADULT LIVER, SIGNAL = 2.4
EXPRESSED IN BT474, SIGNAL = 3.1
EXPRESSED IN HELA, SIGNAL = 9
EXPRESSED IN HBL100, SIGNAL = 15
EXPRESSED IN BRAIN, SIGNAL = 1.7
EXPRESSED IN BRAIN, SIGNAL = 1.7
EXPRESSED IN BRAIN, SIGNAL = 1.7
                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>
                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                     Score 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 23;
Pred! No.
                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                   6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6e+02;
                                                                                                                                                                                                                    DB 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                  Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 36;
                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USEFUL
                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

FO

```
; FEATURE:
; OTHER INFORMATION: EST_HUMAN HIT: AW403965.1, EVALUE 2.00e-13
US-10-182-995-22331
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 04 February 2000 (04.02.00)
PRIOR FILING DATE: 26 May 2000 (26.05.00)
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 03 August 2000 (03.08.00)
PRIOR APPLICATION NUMBER: GB 24263 6
PRIOR APPLICATION NUMBER: GB 24263 6
PRIOR FILING DATE: 03 October 2000 (03.10.00)
PRIOR APPLICATION NUMBER: US 60/234,687,359
PRIOR FILING DATE: 27 September 2000 (27.09.00)
PRIOR APPLICATION NUMBER: US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 22331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                           APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HELA FILE REFERENCE: PB 0004 WO 10
CURRENT APPLICATION NUMBER: US/10/182,997
CURRENT FILING DATE: 2002-08-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 27 September 2000 (27.09.00)
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR FILING DATE: 21 September 2000 (21.09.00)
PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 30 June 2000 (30.06.00)
NUMBER OF SEQ ID NOS: 29119
SOFTMARE: Molecular Dynamics Sequence Listing E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILLING DATE: 04 February 2000 (04.02.00)
PRIOR FILLING TON NUMBER: US 60/207,456
PRIOR FILLING DATE: 26 May 2000 (26.05.00)
PRIOR APPLICATION NUMBER: US 90/632,366
PRIOR FILLING DATE: 03 AUGUST 2000 (03.08.00)
PRIOR APPLICATION NUMBER: GB 24263.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILE REFERENCE: PB 0004 WO 1
CURRENT APPLICATION NUMBER: US/10/182,995
CURRENT FILING DATE: 2002-08-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN HEART
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Molecular Dynamics, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 36
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \PPLICANT: Molecular Dynamics,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30 NYDA 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 60/236,359
APPLICATION NUMBER: US 60/236,359
APPLICATION NUMBER: 27 September 2000 (27.09.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hanzel, David I
Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hanzel, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rank, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/10182997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MAP TO AC010732.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ດ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Engine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
δÃ
                                                                       ; OTHER INFORMATION: US-10-182-998-12622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-182-998-12622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-182-997-20978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Molecular Dynamics Sequence Listing Engine SEQ ID NO 20978
LENGTH: 36
                                                                                                                                                                                                                                                       SOFTWARE: Molecular Dynamics Sequence Listing Engine SEQ ID NO 12622
 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 12622,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC
TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HBL 100
FILE REFERENCE: PB 0004 WO 9
FILE REFERENCE: PB 0004 WO 9
CURRENT APPLICATION NUMBER: US/10/182,998
                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 26 May 2000 (26.05.00)
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 03 August 2000 (03.08.00)
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR FILING DATE: 03 October 2000 (03.10.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 30 June 2000 (30.06.00)
NUMBER OF SEQ ID NOS: 26941
                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 15009
                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 60/180,312 PRIOR FILING DATE: 04 February 2000 (04
                                                                                                                                                                                       LENGTH: 36
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Molecular Dynamics,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens
FEATURE:
OTHER INFORMATION: MAP TO AC010732.1
                                                                                                                                                               OTHER INFORMATION:
                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: EST_HUMAN HIT: AW403965.1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                              FEATURE:
                                                                                                                             OTHER INFORMATION:
                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30 NYDA 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 09/608,408
APPLICATION NUMBER: US 60/234,687
FILING DATE: 21 September 2000 (21.09.00)
APPLICATION NUMBER: US 09/608,408
                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 03 October 2000 (03.10.00) APPLICATION NUMBER: US 60/236,359
 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Penn,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rank, David R
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10182998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sharron G.
                                                                                                                           EXPRESSED IN HBL100, SIGNAL =
                                                                                                                                                               MAP TO AC010732.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EXPRESSED IN HELA, SIGNAL
                                                                                      EST_HUMAN HIT: AW403965.1, EVALUE
                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                  Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000 (04.02.00)
   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6e+02;
                                 DB 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EVALUE 2.00e-13
 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                               15
                                   Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 36;
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACID PROBES USEFUL
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
 Gaps
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

Ö

γg

망

30

NYDA

33

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                         US-10-203-135-27555
                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: EST_HUMAN HIT: AW403965.1, EVALUE 2.00e-13 US-10-203-134-28641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-203-134-28641
                                                                                                                                                                                                                                                                                                                                                         Sequence 27555, Appl GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Molecular Dynamics Sequence Listing Engine SEQ ID NO 28641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                   APPLICANT: APPLICANT:
            TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACTIVE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN LUNG FILE REFERENCE: PB 0004 WO 5 CURRENT APPLICATION NUMBER: US/10/203,135 CURRENT FILING DATE: 2002-08-02 PRIOR APPLICATION NUMBER: US 60/180,312 PRIOR PILING DATE: 04 FEBTUARY 2000 (04.02.00) PRIOR PILING DATE: 04 FEBTUARY 2000 (04.02.00) PRIOR APPLICATION NUMBER: US 60/207,456 PRIOR FILING DATE: 26 May 2000 (26.05.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 26 May 2000 (26.05.00)
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 03 August 2000 (03.08.00)
PRIOR APPLICATION NUMBER: US 24253.6
PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR APPLICATION NUMBER: US 60/236,359
                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                APPLICANT: Molecular Dynamics, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 30 June NUMBER OF SEQ ID NOS: 38628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/203,134
CURRENT FILING DATE: 2002-08-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN BONE MARROW
PRIOR APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: PB 0004 WO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Molecular Dynamics, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 04 February 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: MAP TO AC010732.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30 NYDA 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 21 September 2000 (21.09.00)
APPLICATION NUMBER: US 09/608,408
FILING DATE: 30 June 2000 (30.06.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 60/180,312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 27 September 2000 (27.09.00)
APPLICATION NUMBER: US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                   Hanzel, David K.
Chen, Wensheng
                                                                                                                                                                                                                                                                                   Penn, Sharron G. Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Penn, Sharron G. Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hanzel, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                Application US/10203135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/10203134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000 (03.10.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (04.02.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                          ACID PROBES USEFUL FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
; OTHER INFORMATION: EST_HUMAN HIT: AW403965.1, EVALUE 2.00e-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-203-136-28648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: US-10-203-135-27555
                                                                                                                                                                              SEQ ID NO 28648
LENGTH: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 27555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                    SOFTWARE: Molecular Dynamics
                                                                                                                                                                                                                                      PRIOR FILING DATE: 30 June NUMBER OF SEQ ID NOS: 38578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/203,136
CURRENT FILING DATE: 2002-08-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR FILING DATE: 21 September 2000 (21.09.00)
PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 30 June 2000 (21.09.00)
                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 21 September 2000 (21.09.00)
PRIOR APPLICATION NUMBER: US 09/608,408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN ADULT LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: US 60/180,312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILE REFERENCE: PB 0004 WO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Molecular Dynamics, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Molecular Dynamics Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                               OTHER INFORMATION: MAP TO AC010732.1
                                                                                                                              ORGANISM: Homo sapiens
                                         FEATURE:
                                                        OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL =
                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo sapiens
                                                                               FEATURE:
                                                                                                                                                            TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH:
                                                                                                                                                                                                                                                                                                               OR FILING DATE: 04 February 2000 (04.02.00)
OR APPLICATION NUMBER: US 60/207,456
OR FILING DATE: 26 May 2000 (26.05!00)
OR APPLICATION NUMBER: US 09/632,366
OR FILING DATE: 03 August 2000 (03!08.00)
OR APPLICATION NUMBER: GB 24263.6
OR APPLICATION NUMBER: GB 24263.6
OR APPLICATION NUMBER: US 60/236,359
OR APPLICATION NUMBER: US 60/234,687
OR APPLICATION NUMBER: US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30 NYDA 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 03 October 2000
APPLICATION NUMBER: US 60/236
FILING DATE: 27 September 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 30 June 2000 (30.06.00)
OF SEQ ID NOS: 37012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Penn, Sharron G. Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hanzel,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10203136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03 August 2000 (03.08.00)
NUMBER: GB 24263.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST_HUMAN HIT: AW403965.1, EVALUE 2.00e-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EXPRESSED IN LUNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MAP TO AC010732.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2002-08-02
                                                                                                                                                                                                                                                         2000
                                                                                                                                                                                                                  Sequence Listing Engine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 23;
Pred. No.
                                                                                                                                                                                                                                                           (30.06.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (03.10.00)
                                                                                                                                                                                                                                                                                                                                      27.09.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Listing Engine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIGNAL =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USEFUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

OE

```
US-10-203-138-12929

; Sequence 12929, Application US/10203138
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR PELICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 26 May 2000 (26.05.00)
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 03 August 2000 (03.08.00)
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR FILING DATE: 03 October 2000 (03.10.00)
PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR APPLICATION NUMBER: US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 39
US-10-203-137-28914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: EST_HUMAN HIT: AW403965.1, EVALUE 2.00e-13 US-10-203-137-28914
                                                                                                                                                                                                                                                                             RESULT 40
                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 28914,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 28914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
APPLICANT: Penn, Sharron G.
APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN BT 474
WILE REFERENCE: PB 0004 WO 8
                                                                                                     APPLICANT: Molecular Dynamics, APPLICANT: Penn, Sharron G. APPLICANT: Rank, David R. APPLICANT: Hanzel, David K. APPLICANT: Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 21 September 2000 (21.09.00)
PRIOR FAPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 30 June 2000 (30.06.00)
NUMBER OF SEQ ID NOS: 38837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN PLACENTA
FILE REFERENCE: PB 0004 WO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/203,137
CURRENT FILING DATE: 2002-08-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Molecular Dynamics, APPLICANT: Penn, Sharron G. APPLICANT: Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Molecular Dynamics Sequence Listing Engine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: MAP TO AC010732.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL - 3.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                       30 NYDA 33
                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30 NYDA 33
                                                                                                                                                                                                                                                                                                                                                                                   1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/10203137
                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                           Score 23; DB Pred. No. 6e+
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23; DB 26
Pred. No. 6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                 6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26;
                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                             0,
```

```
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 04 February 2000 (04.02.00)
PRIOR PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 26 May 2000 (26.05.00)
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR FILING DATE: 03 August 2000 (03.08.00)
PRIOR FILING DATE: 03 October 2000 (03.10.00)
PRIOR PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR APPLICATION NUMBER: US 60/608,408
PRIOR FILING DATE: 31 September 2000 (21.09.00)
PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 30 June 2000 (30.06.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 41
US-10-203-139-27774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    us-10-203-138-12929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER: MOLECT
SOFTWARE: MOLECT
SEQ ID NO 12929
FRIGTH: 36
                                                                              SOFTWARE: Mole
SEQ ID NO 27774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 27774, Application US/10203139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 27 September 2000 (27.09.00)
PRIOR APPLICATION NUMBER: US 60/34,687
PRIOR FILING DATE: 21 September 2000 (21.09.00)
PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 30 June 2000 (30.06.00)
NUMBER OF SEC TO THE PRIOR FILING DATE: 30 June 2000 (30.06.00)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 03 October 2000 (03.10.00)
PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR FILING DATE: 27 September 2000 (27.09.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 60/180, 312
PRIOR FILING DATE: 04 February 2000 (04.02.00)
PRIOR ENLICATION NUMBER: US 60/207, 456
PRIOR FILING DATE: 26 May 2000 (26.05.00)
PRIOR PPLICATION NUMBER: US 09/632,366
PRIOR PRIOR DATE: 03 AUGUST 2000 (03.08.00)
PRIOR APPLICATION NUMBER: GB 24263.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: PB 0004 WO 4
CURRENT APPLICATION NUMBER: US/10/203,139
CURRENT FILING DATE: 2002-08-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FO
TITLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN HUMAN FETAL LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Molecular Dynamics, APPLICANT: Penn, Sharron G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 15438
                                                                                                                                   NUMBER OF SEQ ID NOS: 37156
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: MAP TO AC010732.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
                                                       LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30 NYDA 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                       Molecular Dynamics Sequence Listing Engine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Molecular Dynamics Sequence Listing Engine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hanzel,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rank, David R. Hanzel, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Penn,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; ilarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sharron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST_HUMAN HIT: AW403965.1, EVALUE 2.00e-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EXPRESSED IN BT474, SIGNAL = 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002-08-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/10/203,138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

0

```
US-60-170-373-3392
; Sequence 3392, Application US/60170373
; GENERAL INFORMATION:
; APPLICANT: Bonazzi, Vivien
; TITLE OF INVENTION: ISOLATED HUMAN KINAS
; TITLE OF INVENTION: ACID MOLECULES ENCOUNTIONED OF THE OF INVENTION: THEREOF
; TITLE OF INVENTION: THEREOF
; TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                        RESULT 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 42
US-60-236-359-17638
Sequence 17638, Application US/60236359
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: US-10-203-139-27774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Penn, Shallu....

APPLICANT: Rank, David R.

APPLICANT: Hanzel, David K.

APPLICANT: Henzel, David K.

APPLICANT: Chen, Wensheng

TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY

TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY

TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: MAP TO ACOIL
OTHER INFORMATION: EXPRESSED IN
                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Mol
SEQ ID NO 17638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
CURRENT APPLICATION NUMBER: US/60/170,373
CURRENT FILING DATE: 1999-12-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT FILING DATE: 2000-09-27
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
NUMBER OF SEQ ID NOS: 21709
SOFTWARE: MOLECUlar Dynamics Sequence Listing Engine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE: OTHER INFORMATION:
                                                                                                                                                                                                                                                                      30
                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30 NYDA 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                      NYDA
                                                                                                                                                                                                                                                                                                          NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                   4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity 4; Conserv
                                                                                                                                                                                                                                                                      \omega
                                                                                                                                                                                                                                                                                                                                                 100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                           NN: EXPRESSED IN HEART, SIGNAL = 1.3

NN: EXPRESSED IN LUNG, SIGNAL = 8.4

NN: EXPRESSED IN BONE MARROW, SIGNAL = 1.9

NN: EXPRESSED IN FETAL LIVER, SIGNAL = 1.9

NN: EXPRESSED IN BT474, SIGNAL = 2.4

NN: EXPRESSED IN HELA, SIGNAL = 3.1

NN: EXPRESSED IN HELA, SIGNAL = 1.5

NN: EXPRESSED IN HELA, SIGNAL = 1.7

NN: EXPRESSED IN HELA, SIGNAL = 1.7

NN: EXPRESSED IN BRAIN, SIGNAL = 1.7

NN: EXPRESSED IN BRAIN, SIGNAL = 1.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MAP TO AC010732.1
EXPRESSED IN PLACE EXPRESSED IN HEAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST_HUMAN HIT: AW403965.1, EVALUE 2.00e-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TO AC010732.1
                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IN PLACENTA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IN FETAL LIVER,
                                                                                                                                                                                                                                                                                                                                                                Score 23; DB 27;
Pred. No. 6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23; DE
Pred. No. 6e+
); Mismatches
                                                                      KINASE PROTEINS, NUCLEIC ENCODING HUMAN KINASE PROTIENS AND USES
                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 26;
6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIGNAL =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIGNAL
                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                   Length 36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.9
                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
밁
                         QΥ
                                                                                                              ; ORGANISM: HUMAN US-60-192-746-1760
                                                                                                                                                                                                                                                                                                                                         US-60-192-746-1760
                                                                                                                                                                                                                                                                                                                                                           RESULT 45
                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: HUMAN US-60-195-053-1799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 44
US-60-195-053-1799
; Sequence 1799, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Human US-60-170-373-3392
                                                                                                                                                                                                         Sequence 1760, Application US/60192746
GENERAL INFORMATION:
APPLICANT: BONAZZI, VIVIEN
TITLE OF INVENTION: ISOLATED HUMAN TRANSPORTER PROTEINS,
TITLE OF INVENTION: NUCLEIC ACID MOLECULES ENCODING HUMA
TITLE OF INVENTION: AND USES THEREOF
FILE REFERENCE: CL000401
CURRENT APPLICATION NUMBER: US/60/192,746
CURRENT FILING DATE: 2000-03-28
NUMBER OF SEC IN NO. 2010-03-28
                                                                                                                                                   NUMBER OF SEQ ID NOS: 2142
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 1760
LENGTH: 38
                                                 Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
SEQ ID NO 1799
LENGTH: 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
SEQ ID NO 3392
LENGTH: 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: BONAZZI, VIVIEN
TITLE OF INVENTION: ISOLATED HUMAN SECRET
TITLE OF INVENTION: UCLEIC ACID MOLECULI
FILE OF INVENTION: USES THEREOF
FILE REFERENCE: CLOO0427
CURRENT APPLICATION NUMBER: US/60/195,053
CURRENT FILING DATE: 2000-04-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 37
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
25 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                   21 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                  1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity nes 4; Conserv
                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28 NYDA 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                     24
                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/60195053
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ISOLATED HUMAN SECRETED PROTEINS, ION: NUCLEIC ACID MOLECULES ENCODING HOOSES THEREOF CL000427
                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Version
                                                                 Score
Pred!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 23;
Pred. No.
                                                    Mişmatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ismatches
                                                                 23;
No.
                                                                                                                                                                                  4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.0
                                                                 6.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.1e+02;
                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .1e+02;
                                                                               27;
                                                                             Length 38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                   HUMAN TRANSPORTER PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HUMAN SECRETED PROTEINS, AND
                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

Search completed: February 6, 2003, 11:37:36 Job time : 135.167 secs

20										
										47
.,										
1394	Mark of the	Action .	4. 4. 19. 1	1 -H P	Way - Flan	• • • · · · · · · · · · · · · · · · · ·	STATE OF THE STATE	seed to the	ty t	
44.4 *										
						· 🐧			*	
4										
	era dissa	en in the second	of the borner	TENDER TO BE	New York was a contract to	2.23	· Os. Asymbia	e y de very de la very	The second of the second of the second	
	100 600 0000000	शन रिकार	327.00				**************************************	as a rest of the	· · · · · · · · · · · · · · · · · · ·	
h										
Program										
ap (a		1						4 8		
٠ <u>ـ</u> څخ			- 4					e er e e ge		
e L										
ille. Visi						A -				
4								g		
0			- 10			-				
						6. Ne				
		9.	7			.			7 × ×	
									· ·	
MY.		- 1	1988 - 197	2		The state of the s		The second of the second	geting to the production	7
P .	š .					*. *.				
						*				
			¥= -1			·				
\$									×	
¥.,										
1-			· ·							
100.1										
· 19		*						<i>f</i> * -	5. W	
									fel .	
									V V	
∳ (_4					•					
L.Y.			ž.					8		
1	,,,,	· ·						 		
guare :			<i>ii</i>							
1	.59								k thinks	
									- 100 au	
									er Setera Setera	
			*							
									e .	
										•
			y =				*			
					*	40 A				
è				· ·					*	
1									7 (w	

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB seq length: Maximum DB seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein - protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 on :
        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Match
      100.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pending_Patents_AA_New:*

1: /cgn2_6/ptodata/2/paa/PCT_NEW_COMB.pep:*

2: /cgn2_6/ptodata/2/paa/US06_NEW_COMB.pep:*

3: /cgn2_6/ptodata/2/paa/US07_NEW_COMB.pep:*

4: /cgn2_6/ptodata/2/paa/US08_NEW_COMB.pep:*

5: /cgn2_6/ptodata/2/paa/US08_NEW_COMB.pep:*

6: /cgn2_6/ptodata/2/paa/US08_NEW_COMB.pep:*

7: /cgn2_6/ptodata/2/paa/US08_NEW_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT943-5
23
                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    February 6, 2003, 11:19:49; Search time 14 Seconds (without alignments) 23.165 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        405691 seqs, 81078759 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 nyda 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.3 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
20000000000
        Gapext 0
US-10-203-138A-12929
US-10-099-782A-43
US-10-099-782A-44
US-10-099-782A-45
US-10-099-782A-47
US-10-099-782A-47
US-10-099-782A-50
US-10-099-782A-51
US-10-099-782A-52
US-10-099-782A-53
US-10-099-782A-54
US-10-099-782A-54
US-10-099-782A-55
US-10-099-782A-56
US-10-099-782A-56
US-10-099-782A-58
US-10-099-782A-59
US-10-099-782A-59
US-10-099-782A-59
US-10-099-782A-59
US-10-099-782A-51
US-10-099-782A-51
US-10-099-782A-51
US-10-099-782A-51
US-10-099-782A-51
US-10-099-782A-51
US-10-099-782A-51
US-10-099-782A-51
US-10-099-782A-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Description
  Sequence
12929, A
Appl
44, Appl
45, Appl
46, Appl
48, Appl
48, Appl
50, Appl
51, Appl
51, Appl
53, Appl
53, Appl
55, Appl
55, Appl
55, Appl
55, Appl
55, Appl
56, Appl
57, Appl
58, Appl
59, App
```

g Qy

1 NYDA 4 |||| 30 NYDA 33

Query Match 100.0%; Score 23; DB 6; Length 36; Best Local Similarity 100.0%; Pred. No. 36; Matches 4; Conservative 0; Mismatches 0; Indels 0; Gaps	US-10-203-138A-12929 US-10-203-138A-12929 Sequence 12929, Application US/10203138A GENERAL INFORMATION: APPLICANT: Molecular Dynamics, Inc. APPLICANT: Molecular Dynamics, Inc. APPLICANT: Hanzel, David K. APPLICANT: ANALYSIS OF GENE EXPRESSION IN BT 474 FILLE OF INVENTION: ANALYSIS OF GENE EXPRESSION IN BT 474 FILLE OF INVENTION: UNMER: US 60/180, 312 PRIOR APPLICATION NUMBER: US 60/200, 456 PRIOR FILLING DATE: DATE: US 60/207, 456 PRIOR FILLING DATE: US AUGUST 2000 (04.02.00) PRIOR APPLICATION NUMBER: US 60/207, 456 PRIOR FILLING DATE: US AUGUST 2000 (03.08.00) PRIOR APPLICATION NUMBER: US 09/632, 366 PRIOR APPLICATION NUMBER: US 60/236, 359 PRIOR APPLICATION NUMBER: US 60/236, 687 PRIOR APPLICATION NUMBER: US 60/236, 689 PRIOR FILLING DATE: 21 September 2000 (27.09.00) PRIOR APPLICATION NUMBER: US 60/236, 689 PRIOR FILLING DATE: 23 June 2000 (21.09.00) PRIOR APPLICATION NUMBER: US 60/236, 689 PRIOR FILLING DATE: 20 June 2000 (30.06.00) PRIOR APPLICATION NUMBER: US 60/236, 689 PRIOR FILLING DATE: 20 June 2000 (30.06.00) PRIOR APPLICATION NUMBER: US 60/236, 689 PRIOR FILLING DATE: 21 September 2000 (21.09.00) PRIOR APPLICATION NUMBER: US 60/236, 689 PRIOR FILLING DATE: 20 June 2000 (30.06.00) PRIOR APPLICATION NUMBER: US 60/236, 689 PRIOR FILLING DATE: 30 June 2000 (30.06.00) PRIOR APPLICATION NUMBER: US 60/236, 689 PRIOR FILLING DATE: 30 June 2000 (30.06.00) PRIOR APPLICATION NUMBER: US 60/236, 689 PRIOR FILLING DATE: 30 June 2000 (30.06.00) PRIOR APPLICATION NUMBER: US 60/236, 689 PRIOR FILLING DATE: 30 June 2000 (30.06.00) PRIOR APPLICATION NUMBER: US 60/236, 689 PRIOR FILLING DATE: 30 June 2000 (30.06.00) PRIOR APPLICATION NUMBER: US 60/236, 689 PRIOR FIL	27 23 100.0 66 6 US-10-099-782A-63 Sequence 63, P 28 23 100.0 66 6 US-10-099-782A-139 Sequence 239, 29 23 100.0 66 6 US-10-099-782A-239 Sequence 239, 30 23 100.0 66 6 US-10-099-782A-64 31 23 100.0 67 6 US-10-099-782A-138 Sequence 291, 31 23 100.0 67 6 US-10-099-782A-138 Sequence 291, 32 23 100.0 68 6 US-10-099-782A-138 Sequence 238, 33 23 100.0 68 6 US-10-099-782A-137 Sequence 238, 35 23 100.0 68 6 US-10-099-782A-137 Sequence 237, 36 23 100.0 69 6 US-10-099-782A-137 Sequence 237, 37 23 100.0 69 6 US-10-099-782A-136 Sequence 237, 38 23 100.0 69 6 US-10-099-782A-136 Sequence 237, 41 23 100.0 70 6 US-10-099-782A-136 Sequence 236, 42 23 100.0 70 6 US-10-099-782A-135 Sequence 236, 43 23 100.0 70 6 US-10-099-782A-135 Sequence 235, 44 23 100.0 71 6 US-10-099-782A-135 Sequence 235, 45 23 100.0 71 6 US-10-099-782A-134 Sequence 133, 45 23 100.0 71 6 US-10-099-782A-134 Sequence 134, 45 23 100.0 71 6 US-10-099-782A-134 Sequence 134,
	ID PROBES	139, 139, 239, 231, 231, 238, 238, 238, 236, 236, 237, 235, 235, 235, 235, 235, 235, 235, 235
0;	USEFUL	App

Ę

```
RESULT 4
US-10-099-782A-45
; Sequence 45, Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
                                                                                                                                      ρ
                                                                                                     밁
                                                                                                                                                                                                                                                 US-10-099-782A-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-099-782A-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-099-782A-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-099-782A-43
                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 43
LENGTH: 45
TYPE: PRT
ORGANISM: Homo Sapiens
                                                                                                                                                                         Matches
                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 44, Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 43, Application US/10099782A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Ji-ming Wang
APPLICANT: Joost J. Opl
APPLICANT: Shao-Bo Su
                                                                                                                                                                                                                                                             LENGTH: 46
TYPE: PRT
ORGANISM: HOMO Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Opp
APPLICANT: Shao-Bo Su
                                                                                                  42
                                                                                                                                                                        Local Similarity hes 4; Conserv
                                                                                                                                      1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                  NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Joost J. Oppenheim
Shao-Bo Su
                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oppenheim
                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                       Score 23; DB Pred. No. 47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 23; DB Pred. No. 45;
                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                        6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6; Length 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                      Length 46;
                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

```
US-10-099...
; Sequence 47, App...
; GENERAL INFORMATION:
; APPLICANT: Ji-Ming Wang
; APPLICANT: Joost J. Oppenhe/
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gong
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Oppenheim
APPLICANT: Mono-Bo Su
APPLICANT: Wang-Hua Gong
APPLICANT: Wang-Hua Gong
APPLICANT: Williang Gao
INTITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE; UNH73.001c1
CURRENT APPLICATION NUMBER: US/10/09,782A
CURRENT APPLICATION NUMBER: DECT/US99/21770
PRIOR APPLICATION WINDER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
NUMBER OF SEQ ID NOS: 301
                                                                                                                                                       RESULT 6
                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                  ; TYPE: PRT; ORGANISM: Homo Sapiens US-10-099-782A-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
US-10-099-782A-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; LENGTH: 47
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-099-782A-45
                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: FastSEQ for Windows Version SEQ ID NO 46 | LENGTH: 48
                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 46, Applica GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Ji-Ming Wang
APPLICANT: JOSET J. Oppenheim
APPLICANT: Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: UTILIZATION OF EPRL1 AS A FUNCTIONAL TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA) FILE REFERENCE: NIH173.001C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                           42 NYDA 45
                                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NYDA 4
                                                                                                                                                                                                                                                                             4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4; Conservative
                                                                                                                  Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wang-Hua Gong
Ji-Liang Gao
Philip M. Murphy
                                                            Oppenheim
                                                                                                                                                                                                                                                                                            100.0%; Score
100.0%; Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
Pred.
                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      e 23; DB
. No. 48;
                                                                                                                                                                                                                                                                                              No.
                                                                                                                                                                                                                                                                                                             6; Length 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6; Length 47;
                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

0

```
APPLICANT: Wang-Hua Gong
APPLICANT: J1-Liang Gao
APPLICANT: J1-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 48
LENGTH: 50
TYPE: PRT
ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-099-782A-47
                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-099-782A-48
                                                                                                                                                                                                                            US-10-099-782A-49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 4
Sequence 49, Application US/10099782A
GENERAL INFORMATION:
APPLICANT: J1-Ming Wang
APPLICANT: Joost J. Oppenheim
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gong
APPLICANT: J1-Liang Gao
APPLICANT: J1-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 301
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 47
LENGTH: 49
                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 48, Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: J1-Ming Wang
APPLICANT: Joost J. Opp
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA) FILE REFERENCE: N1H173.001C1 CURRENT APPLICATION NUMBER: US/10/099,782A CURRENT FILING DATE: 2002-10-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity nes 4; Conserv
                                                                                                                                                                                                                                                                                                                  42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                               4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Joost J. Oppenheim
Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ji-Liang Gao
Philip M. Murphy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 23; ilarity 100.0%; Pred. No. Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 23; DB 100.0%; Pred. No. 51;
                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 6; Length 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6;
                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 49
                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                            0,
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-099-782A-50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Homo Sapiens US-10-099-782A-49
                                                                                                                                                                                                                                                                                                        US-10-099-782A-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-099-782A-50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 4; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity Matches, 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 49 LENGTH: 51
                                                                                                                                                                                                                                                                  Sequence 51, Application US/10099782A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 50, Applica GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Wang-Hua Gong
APPLICANT: J1-Liang Gao
APPLICANT: D11-Liang Gao
APPLICANT: P111p M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: N1H173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Oppenheim
APPLICANT: Shao-Bo Su
                                                                                                                                                                                                       APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Opl
APPLICANT: Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/10/099,782A CURRENT FILING DATE: 2002-10-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: PCT/US99/21770 PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: PCT/US99/21770 PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 52
                                                                                                                                                                                                                                                                                                                                                                                            42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                        Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 6;
53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 51,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

0;

```
US-10-099-782A-53; Sequence 53, Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: PRT; ORGANISM: Homo Sapiens US-10-099-782A-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-099-782A-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-099-782A-51
                NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 53
LENGTH: 55
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loc
Matches
                                                                                                APPLICANT: Wang-Hua Gong
APPLICANT: Wang-Hua Gong
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIHI73.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 52
LENGTH: 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                   APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Opp
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 52, Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Philip Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Ji-ming Wang
APPLICANT: Joost J. Op
APPLICANT: Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS:
ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 53
TYPE: PRT
ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                               42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 100 nes 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FastSEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; ilarity 100.0%; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for Windows Version 4.0
                                                                                                                                                                                                                                                                                                  Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23; DE Pred. No. 55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6; Length 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

```
US-10-099-782A-55
                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
US-10-099-782A-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 54
LENGTH: 56
TYPE: PRT
ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-099-782A-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
US-10-099-782A-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γ
                                                                                                       SOFWARE: FastSEQ for Windows Version SEQ ID NO 55
LENGTH: 57
TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-099-782A-53
Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                           Sequence 55, Application US/10099782A GENERAL INFORMATION:
                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
                                                                                                                                                                                                                                         APPLICANT: JOOST J. Oppenheim
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
APPLICANT: INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIHI 73.001C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 54, Application US/10099782A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0%; Score 23; Best Local Similarity 100.0%; Pred. No. Matches 4; Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                          APPLICANT: Ji-ming Wang
APPLICANT: Joost J. Opr
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA) FILE REFERENCE: NIH173.001C1
                                                                                TYPE: PRT
ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Ji-Ming Wang APPLICANT: Joost J. Opp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity les 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wang-Hua Gong
Ji-Liang Gao
Philip M. Murphy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Joost J. Op
Shao-Bo Su
   100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                    Score 23;
Pred! No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 23; DB Pred. No. 57;
   mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 6;
56;
                               DB 6; Length 57,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6;
   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 55;
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
```

Gaps

0;

```
CURRENT APPLICATION NUMBER: US/10/099,782A
COURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 57
LENGTH: 59
TYPE: PRT
ORGANISM: Homo Sapiens
US-10-099-782A-57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : NUMBER OF SEQ ID NOS: 301

: SOFTWARE: FastSEQ for Windows Version 4.0

: SEQ ID NO 56

: LENGTH: 58

: TYPE: PRT

: ORGANISM: Homo Sapiens

US-10-099-782A-56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
밁
                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-099-782A-57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-099-782A-56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: J1-Ming Wang
APPLICANT: JOOST J. OPI
APPLICANT: Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 56, Application US/10099782A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                    Query Match
Best Local Similarity
                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Wang-Hua Gong
APPLICANT: J1-Liang Gao
APPLICANT: J1-Liang Gao
APPLICANT: Philip M. MUTPHY
APPLICANT: Philip M. MUTPHY
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/09,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-9-22
                                                                                                                                                                                                                                                                                                                                           APPLICANT: Wang-Hua Gong
APPLICANT: J1-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A F
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID
FILE REFERENCE: NIH173.001C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Opl
APPLICANT: Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 100.
hes 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NYDA 4
42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                 1 NYDA 4
                                                                     4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Joost J. Oppenheim
Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Joost J. Oppenheim
Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/10099782A
                                                                   100.0%;
illarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 23; DE 100.0%; Pred. No. 59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                     0
                                                                   Score 23; DB (
Pred. No. 61;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                A FUNCTIONAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6;
                                                                                                     6; Length 59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 58;
                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                   0;
                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                   0;
```

```
LENGTH: 60
TYPE: PRT
ORGANISM: Homo Sapiens
US-10-099-782A-58
밁
                                                                                                                                             NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 59
LENGTH: 61
TYPE: PRT
ORGANISM: Homo Sapiens
US-10-099-782A-59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-099-782A-59
: Sequence 59, Application US/10099782A
: GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-099-782A-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 58
                                                                      Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 58, Application US/10099782A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                          APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/09,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
CURRENT FILING DATE: 2002-10-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Ji-Ming Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Ji-Ming_Wang
42 NYDA 45
                                                                      Local Similarity
les 4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match 100.0%;
Local Similarity 100.0%;
les 4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                    1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Joost J. Op
Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Joost J. Op
Shao-Bo Su
                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oppenheim
                                                                                      100.0%; Score 23; DB 6; Length 61; 100.0%; Pred. No. 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 6;
                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                        0;
```

RESULT 19 US-10-099-782A-60 ; Sequence 60, Application US/10099782A ; GENERAL INFORMATION:

```
APPLICANT: Ji-Liang Gao
APPLICANT: Ji-Liang Gao
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. MUTPHY
ITITLE OF INVENTION: UTILIZATION OF FPRLI AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173,001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
CURRENT FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 60
LENGTH: 62
TYPE: PRT
ORGANISM: Homo Sapiens
US-10-099-782A-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
APPLICANT: Philip M. Murphy
APPLICANT: Philip M. Murphy
APPLICANT: Philip M. Murphy
APPLICANT: UTILIZATION OF FPRLI AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-099-782A-61
                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo Sapiens
US-10-099-782A-61
                                                                                        US-10-099-782A-62
Sequence 62, Application US/10099782A
GENERAL INFORMATION:
                                                                                                                                                                                                   Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 61, Application US/10099782A GENERAL INFORMATION:
                                                                                                                                                RESULT 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: J1-Ming Wang
APPLICANT: Joost J. Oppe
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gong
APPLICANT: J1-Liang Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Ji-Ming Wang
                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 61
                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                            Matches
             APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Op
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Go
                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 63
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
les 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NYDA 4
                                                                                                                                                                                                                                                                          Local Similarity les 4; Conserv
                                                                                                                                                                                                       42 NYDA 45
                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Joost J. O
Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Joost J. Oppenheim
Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
Wang-Hua Gong
Ji-Liang Gao
                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                      Oppenheim
                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23;
pred. No.
                                                                                                                                                                                                                                                                                                     Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                           DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        σ
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 62;
                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                         Length 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                              0;
```

```
CURRENT FILING DATE: 2002-10-25
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 141
LENGTH: 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; LENGTH: 64
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-099-782A-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       β
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Thes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-099-782A-141
Sequence 141, Application US/10099782A
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-099-782A-141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 62
                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH1/3.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21/770
PRIOR FILING DATE: 1999-09-22
PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                                           US-10-099-782A-241
                                                                                                                                                                                                                                                                                 RESULT 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Oppenheim
APPLICANT: Shao-Bo Su
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Ji-Liang Gao
APPLICANT: Uni-Liang Gao
APPLICANT: Wang-Hua Gong
APPLICANT: Wang-Hua Gong
APPLICANT: Wang-Hua Gong
APPLICANT: WANG-HUA GAO
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
                                                                                                                                                                                                            Sequence 241, Application US/10099782A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
APPLICANT: Ji Ming Wang
APPLICANT: Joost J. Oppenheim
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gong
APPLICANT: Wang-Hua Gong
APPLICANT: Ji Liang Gao
APPLICANT: Philip M. Murphy
APPLICANTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099/782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                      1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                        score 23; DB pred. No. 66; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               red.| No. 66;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 6; Length 64; 66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

```
APPLICANT: Joost J. Oppenheim
APPLICANT: Shao-Bo Su
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gong
APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT APPLICATION NUMBER: PCT/US99/21770
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 140
LENGTH: 65
TYPE: PRT
ORGANISM: HOMO Sapiens
APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NOMBER OF SEQ ID NOS: 301
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 241
LENGTH: 64
TYPE: PRT
ORGANISM: Homo Sapiens
US-10-099-782A-241
                                                                                                                                                                                                                                                                                                                                                                   RESULT 25
US-10-099-782A-240
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-099-782A-140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                         Sequence 240, Application US/10099782A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 140, Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Opp
APPLICANT: Shao-Bo Su
                                                                                                                                                                                                                                                          APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Opp
APPLICANT: Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: PCT/US99/21770 PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match 100.0%;
Local Similarity 100.0%;
les 4; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 NYDA 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NYDA 4
                                                                                                                                                                                                                                                          Joost J. Oppenheim
Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 23; DB 6; llarity 100.0%; Pred. No. 67; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2002-10-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 63
LENGTH: 66
TYPE: PRT
ORGANISM: Homo Sapiens
US-10-099-782A-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; ORGANISM: Caenorhabditis elegans; FEATURE:
; NAME/KEY: misc_feature; LOCATION: (1)..(30); OTHER INFORMATION: Xaa = any amino acid US-09-084-303B-291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/
CURRENT FILING DATE: 1998-05-26
NUMBER OF SEO ID NOS: 302
SOFTWARE: PatentIn version 3.1
SEO ID NO 291
LENGTH: 66
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Homo Sapiens
US-10-099-782A-240
                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-099-782A-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-084-303B-291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 240
LENGTH: 65
                                                                                                                                                                                                                                                                                                                                                                                      Sequence 63, Application US/10099782A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100
Matches 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 291, Application US/09084303B
                                                                                                                                                                                                         APPLICANT: Joost J. Oppenheim
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gong
APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRLI AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Doberstein, Stephen
APPLICANT: Reddy, Bindu
APPLICANT: Platt, Darren
APPLICANT: Ferguson, Kimberly
TITLE OF INVENTION: NUCLEIC ACIDS AND PROTEINS OF
TITLE OF INVENTION: THEREOF
ETTE DEFENORE, 7376-060-060
                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Ji-Ming Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: 7326-069-999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 NYDA 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 23; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/09/084,303B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23; DB Pred. No. 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 6; Length 65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ELEGANS INSULIN-LIKE GENES AN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
PRIOR APPLICATION NUMBER: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 139
SEQ ID NO 139
TYPE: PRT
ORGANISM: Homo Sapiens
US-10-099-782A-139
                                                                                        APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRLI AS A FUNCTIONAL
TITLE OF INVENTION: UTILIZATION OF FPRLI AS A FUNCTIONAL
TILE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT ETLING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 239
LENGTH: 66
                                                                          ; ORGANISM: Homo Sapiens
US-10-099-782A-239
                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 29
US-10-099-782A-239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-099-782A-139 Sequence 139, Application US/10099782A
                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 239, Application US/10099782A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Ji-Ming Wang APPLICANT: Joost J. Opl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.00101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/10/099,782A CURRENT FILING DATE: 2002-10-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Op
                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 100 les 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 NYDA 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                             Wang-Hua Gong
Ji-Liang Gao
Philip M. Murphy
                                                                                                                                                                                                                                                                                                                                                              Joost J. Op
Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Joost J. Op
Shao-Bo Su
       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
ilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                Oppenheim
                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 23; 100.0%; Pred. No.
       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                   Score 23; DB 6;
Pred. No. 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23; DB Pred. No. 68;
     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6; Length 66;
   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                   Length 66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 66;
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
Qy
                                                                                                         US-10-099-782A-64
                                                                                                                                       SEQ ID NO 64
LENGTH: 67
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-099-782A-64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; NAME/KEY: misc_feature
; LOCATION: (1)..(30)
; OTHER INFORMATION: Xaa = any amino
US-10-339-740-291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-339-740-291
                                              Matches
                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 64, Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn version 3.1 SEQ ID NO 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                       SOFTWARE: FastSEQ
                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: PCT/US99/21/770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
                                                                                                                                                                                                                                                                                  APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. MUIPDY
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Opp
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/10/339,740
CURRENT FILING DATE: 2003-01-09
PRIOR APPLICATION NUMBER: US/09/084,303A
PRIOR FILING DATE: 1998-05-26
                                                                                                                        ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Ferguson, Kimberly
TITLE OF INVENTION: NUCLEIC ACIDS AND PROTEINS
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 7326-069-999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Doberstein, Stephen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT ORGANISM: Caenorhabditis elegans FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 66
1 NYDA 4
                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63 NYDA 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NYDA
                                           4;
                                                                                                                                                                                                                                                                                                                               Wang-Hua Gong
Ji-Liang Gao
Philip M. Murphy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Reddy, Bindu
Platt, Darren
                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/10339740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                     for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                            Oppenheim
                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 23; DB
100.0%; Pred No. 68;
                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
                                                         Score 23;
Pred. No.
                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acid
                                                         DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 6;
                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OF C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                       Length 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 66;
                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ELEGANS INSULIN-LIKE GENES AN
                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
```

밁

```
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 138
LENGTH: 67
TYPE: PRT
ORGANISM: Homo Sapiens
US-10-099-782A-138
RESULT 34
US-10-099-782A-65
; Sequence 65, Application US/10099782A
                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 238
LENGTH: 67
TYPE: PRT
ORGANISM: Homo Sapiens
US-10-099-782A-238
                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-099-782A-238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-099-782A-138
; Sequence 138, Application US/10099782A
                                                                                              日
                                                                                                                                                                Matches
                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Ji-Ming Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 238, Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Wang-Hua Gong
APPLICANT: J1-Liang Gao
APPLICANT: J1-Liang Gao
APPLICANT: Philip M. murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Wang-Hua Gong
APPLICANT: J1-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/10/099,782A CURRENT FILING DATE: 2002-10-25 PRIOR APPLICATION NUMBER: PCT/US99/21770 PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Ji-Ming Wang
                                                                                                                                                                Local Similarity hes 4; Conserv
                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match 100.0%; Score 23; Local Similarity 100.0%; Pred. No. (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 NYDA 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                              NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Joost J. Op
Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Joost J. Oppenheim
Shao-Bo Su
                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oppenheim
                                                                                                                                                                             100.0%;
                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                               Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 6; Length 67
                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                Length 67;
                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
Sequence 137, Application US/10099782A

GENERAL INFORMATION:

APPLICANT: Ji-Ming Wang

APPLICANT: Joest J. Oppenheim

APPLICANT: Shao-Bo Su

APPLICANT: Shao-Bo Su

APPLICANT: Wang-Hua Gong

APPLICANT: Philip M. Murphy

TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL

TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)

FILE REFERENCE: NIH173.001C1

CURRENT APPLICATION NUMBER: US/10/099,782A

CURRENT APPLICATION NUMBER: PCT/US99/21770

PRIOR FILING DATE: 1999-09-22

NUMBER OF SEQ ID NOS: 301

SEQ ID NO 137

LENGTH: 68

TYPE: PRT
US-10-099-782A-237; Sequence 237; Application US/10099782A; Sequence 237; Application US/10099782A; GENERAL INFORMATION:
; APPLICANT: Ji-Ming Wang
; APPLICANT: Joost J. Oppenheim
; APPLICANT: Shao-Bo Su
; APPLICANT: Wang-Hua Gong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 65
LENGTH: 68
TYPE: PRT
ORGANISM: Homo Sapiens
US-10-099-782A-65
                                                                                                                                                                                     RESULT 36
                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Homo Sapiens
US-10-099-782A-137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-099-782A-137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 1vv.
Thes 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Wang-Hua Gong
APPLICANT: J1-Liang Gao
APPLICANT: J1-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT FAPPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-9-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Op
APPLICANT: Shao-Bo Su
                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                           Local Similarity 
nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                              5 NYDA 8
                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 23; DB Pred. No. 70;
                                                                                                                                                                                                                                                                                                                                                                                Score 23; DB 6; Length 68; Pred. No. 70;
                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6; Length 68
                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                           Gaps
```

0;

0;

```
; APPLICANT: Ji-Liang Gao
; APPLICANT: Philip M. Murphy
; TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
; TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
; FILE REFERENCE: NIH173.001C1
; CURRENT APPLICATION NUMBER: US/10/099,782A
; CURRENT FILING DATE: 2002-10-25
; PRIOR APPLICATION NUMBER: PCT/US99/21770
; PRIOR APPLICATION NUMBER: PCT/US99/21770
; PRIOR FILING DATE: 1999-09-22
; NUMBER OF SEQ ID NOS: 301
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 237
; LENGTH: 68
                                                                                                                                                                                                          US-10-099-782A-136
                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 66
LENGTH: 69
TYPE: PRT
ORGANISM: Homo Sapiens
US-10-099-782A-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Thes 4; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-099-782A-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-099-782A-237
                                                                                        Sequence 136, Application US/10099782A
GENERAL INFORMATION:
APPLICANT: Ji-Ming Wang
APPLICANT: Joost J. Oppenheim
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 66, Application US/10099782A GENERAL INFORMATION:
  APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEO ID NOS: 301
FILE REFERENCE: NIH173.001C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Ji-Ming Wang APPLICANT: Joost J. Opp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                        42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                               Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 NYDA 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Joost J. Op
Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 23; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oppenheim
                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                     DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 6; Length 68
                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                   Length 69;
                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

```
APPLICANT: Joost J. Oppenheim
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gong
APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF EPRLI AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.00101
CURRENT APPLICATION NUMBER: US/10/099, 782A
CURRENT APPLICATION NUMBER: PCT/US99/21770
PRIOR APPLICATION WASHER: 1999-09-22
NUMBER OF SEQ ID NOS: 301
                                                                                                                                                                                                                                                                       RESULT 40
US-10-099-782A-67
Sequence 67, Application US/10099782A
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: J1-Ming Wang
APPLICANT: J008t J. Oppenheim
APPLICANT: Shao-Bo Su
APPLICANT: Wang-Hua Gong
APPLICANT: J-Liang Gao
APPLICANT: J-Liang Gao
APPLICANT: Philip M. Murphy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Homo Sapiens US-10-099-782A-236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Homo Sapiens US-10-099-782A-136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-099-782A-236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 236
LENGTH: 69
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 136
LENGTH: 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 236, Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA) FILE REFERENCE: NIH173.00101 CURRENT APPLICATION NUMBER: US/10/099,782A CURRENT FILING DATE: 2002-10-25 PRIOR APPLICATION NUMBER: PCT/US99/21770 PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                           APPLICANT: Ji-Ming Wang APPLICANT: Joost J. Opp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                  1 NYDA 4
||||
6 NYDA 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity hes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity les 4; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6 NYDA 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 23; DB
Pred: No. 71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 23; DB
Pred. No. 71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 6; Length 69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 6; Length 69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
APPLICANT: Wang-Hua Gong
APPLICANT: J1-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
TYPE: PRT
COLUMNICATION OF SET OF SECOND ASSETS OF SET OF SET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-099-782A-235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-099-782A-67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Homo Sapiens US-10-099-782A-135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-099-782A-135
                                                                                                         NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 67 LENGTH: 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 4; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 235, Application US/10099782A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 135, Application US/10099782A
                                                                                                                                                                                                                  APPLICANT: Wang-Hua Gong
APPLICANT: J1-Liang Gao
APPLICANT: Philip M. MUTPHY
APPLICANT: Philip M. MUTPHY
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTION.
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999.99-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENERAL INFORMATION:
                                       LENGTH: 70
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Ji-Ming Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ji-Ming Wang
ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match 100.0%; Score 23; Local Similarity 100.0%; Pred. No. les 4; Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7 NYDA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Joost J. Oppenheim
Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Joost J. Op
Shao-Bo Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23; DB Pred. No. 72; DB Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 6; Length 70; 72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 6; Length 70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
APPLICANT: Jost J. Oppenheim
APPLICANT: Joost J. Oppenheim
APPLICANT: Shao-Bo Su
APPLICANT: Shao-Bo Su
APPLICANT: Ji-Liang Gao
APPLICANT: Ji-Liang Gao
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM ANYLOID A (SAA)
FILE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
PRIOR APPLICATION NUMBER: PCT/US99/21770
PRIOR FILING DATE: 1999-09-22
NUMBER OF SEQ ID NOS: 301
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 133
LENGTH: 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; NUMBER OF SEQ ID NOS: 301
; SOFTWARE: FASTSEQ for Windows Version 4.0
; SEQ ID NO 68
; LENGTH: 71
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-099-782A-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЬ
                                                                       ; ORGANISM: Homo Sapiens US-10-099-782A-133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 44
US-10-099-782A-133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-099-782A-235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-099-782A-68; Sequence 68, Application US/10099782A
 Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 133, Application US/10099782A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 4; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Wang-Hua Gong
APPLICANT: Ji-Liang Gao
APPLICANT: Ji-Liang Gao
APPLICANT: Philip M. Murphy
TITLE OF INVENTION: UTILIZATION OF FPRL1 AS A FUNCTIONAL
TITLE OF INVENTION: RECEPTOR BY SERUM AMYLOID A (SAA)
TITLE REFERENCE: NIH173.001C1
CURRENT APPLICATION NUMBER: US/10/099,782A
CURRENT FILING DATE: 2002-10-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: PCT/US99/21770 PRIOR FILING DATE: 1999-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ji-ming Wang
APPLICANT: Joost J. Opp
APPLICANT: Shao-Bo Su
                                                                                                                  LENGTH: 7
y Match 100.0%;
Local Similarity 100.0%;
hes 4; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42 NYDA 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 NYDA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oppenheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                   Score 23; DB Pred. No. 74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 23; DB Pred. No. 74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 23; DB
Pred. No. 72;
   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                    DB 6; Length 71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6; Length 71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
```

```
RESULT 45
US-10-099-782A-134
US-
```

Run on:	OM protein	
February 6,	OM protein - protein search, using sw model	Copyright
February 6, 2003, 11:16:04; Search time 10.5 Seconds (without allgnments) 36.623 Million cell updates/sec	using sw model	GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.

Title: PAT943-5
Perfect score: 23
Sequence: 1 nyda 4 1 nyda 4

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched:

Total number of hits satisfying chosen parameters:

540

283224 segs, 96134422 residues

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 100% Maximum Match 100% Listing first 45 summaries

Database :

PIR_73:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

22 2 2 2 3 2 5 2 5 2 5 5 5 5 5 5 5 5 5 5	18 19 20 21 22 23 24	11 12 13 15 16	1 9 8 10	Result NO. 1 2 3
223 233 233	233233232323233233333333333333333333333	2222222	222222	Score 23 23 23
100.0 100.0 100.0	100.0			Query Match 100.0 100.0 100.0
119 119 121 122 122	110 110 110 110 110 112 116	94 100 103 106 108	900883 90090	Leng
11221	0000000	2000001	277722	3111 BB
YLDGA H84991 C38645 YLHUS	B38645 S26323 A28573 T27515 AG1646 D38645 E38645	R5YM23 AE1789 S06386 A27227 AF1413 B40085	171951 F97131 YLCTA A60952 S60667 171950	ID YLMNA YLMQAR YLMQAR YLDKA
amyloid protein AA hypothetical protein amyloid A protein serum amyloid Al p	amyloid A-like pro Ig heavy chain V r serum amyloid A pr hypothetical protee hypothetical protee amyloid A protein amyloid A protein	ribosomal protein hypothetical prote serum amyloid A pr amyloid protein A hypothetical prote ubiquitin carboxyl	serum amyloid A - hypothetical prote amyloid protein AA amyloid protein AA phosphotransferase serum amyloid A -	Description amyloid protein amyloid protein amyloid protein

δÃ

1 NYDA 4

ALIGNMENTS

Query Match 100.0%; Score 23; DB 1; Length 76; Best Local Similarity 100.0%; Pred. No. 1.1e+02; Matches 4; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	YLMQAR amyloid protein AA - rhesus macaque C;Species: Macaca mulatta (rhesus macaque) C;Date: 07-May-1981 #sequence_revision 07-May-1981 #text_change 31-Dec-1993 C;Accession: A03198 R;Hermodson, M.A.; Kuhn, R.W.; Walsh, K.A.; Neurath, H.; Eriksen, N.; Benditt, E.P. Biochemistry 11, 2934-2938, 1972 A;Title: Amino acid sequence of monkey amyloid protein A. A;Reference number: A03198; MUID:72230069; PMID:4625315 A;Accession: A03198 A;Accession: A03198 A;Residues: 1-76 <heen amyloid="" amyloid<="" c;keywords:="" c;superfamily:="" protein="" th=""><th>Query Match 100.0%; Score 23; DB 1; Length 64; Best Local Similarity 100.0%; Pred. No. 89; Matches 4; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Qy 1 NYDA 4 Db 40 NYDA 43</th><th>d protein AA - American mink ies: Mustela vison (American mink) : 23-Oct-1981 #sequence_revision 23-Oct-1981 #t ssion: A03199; B03199 en, K.; Sletten, K.; Husby, G.; Nordstoga, K. Biochem. 104, 407-412, 1980 e: The primary structure of amyloid fibril prot rence number: A03199; MUID:80156813; PMID:67676 ssion: A03199 cule type: protein dues: 1-64 <wal> ssion: B03199 cule type: protein dues: 1-53 <wal> family: amyloid protein ords: amyloid protein AA1 #status experimen /Product: amyloid protein AA2 #status experimen /Product: amyloid protein carboxylic acid (Gln)</wal></wal></th><th>RESULT 1</th></heen>	Query Match 100.0%; Score 23; DB 1; Length 64; Best Local Similarity 100.0%; Pred. No. 89; Matches 4; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Qy 1 NYDA 4 Db 40 NYDA 43	d protein AA - American mink ies: Mustela vison (American mink) : 23-Oct-1981 #sequence_revision 23-Oct-1981 #t ssion: A03199; B03199 en, K.; Sletten, K.; Husby, G.; Nordstoga, K. Biochem. 104, 407-412, 1980 e: The primary structure of amyloid fibril prot rence number: A03199; MUID:80156813; PMID:67676 ssion: A03199 cule type: protein dues: 1-64 <wal> ssion: B03199 cule type: protein dues: 1-53 <wal> family: amyloid protein ords: amyloid protein AA1 #status experimen /Product: amyloid protein AA2 #status experimen /Product: amyloid protein carboxylic acid (Gln)</wal></wal>	RESULT 1
--	---	--	---	----------

```
C:Species: Mus musculus (house mouse)
C:Date: 02-Aug-1996 #sequence_revisio
C:Accession: I71951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
I59148
                  R;Yamamoto, K.

J. Immunol. 139, 1683-1688, 1987

A;Title: Structural diversity of murine serum amyloid A genes:
A;Reference number: I55984; MUID:87309776; PMID:3624868
A;Accession: I71951
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Superfamily: apolipoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary; translated A;Molecule type: mRNA A;Residues: 1-80 <RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Species: Rattus norvegicus (Norway rat)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 13-Aug-1999
C;Accession: I59148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Superfamily: amyloid
C; Keywords: amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Experimental source: Pekin breed
A;Note: 33-Tyr, 34-Val, and 63-Ser were also found
A;Note: although the sequence shown is homologous with other amyloid AA proteins,
eared to be 12,000, and several additional tryptic peptides were found in low yiel
C;Superfamily: amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Title: The amino acid sequence of duck amyloid A (AA) protein A; Reference number: A03200; MUID:77142518; PMID:845435 A; Accession: A03200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amyloid protein AA - duck (tentative sequence) (fragment)
C;Species: Anas platyrhynchos (domestic duck)
C;Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change 31-Mar-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                serum amyloid A - mouse (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:M23049; NID:g533259; PIDN:AAA40753.1; PID:g533260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R:Tennyson, G.E.; Sabatos, C.A.; Higuchi, K.; Meglin, N.; Brewer, H.B. Proc. Např. Acad. Sci. U.S.A. 86, 500-504, 1989
A:Title: Expression of apolipoprotein B mRNAs encoding higher and low A;Reference number: I59148; MUID:89098961; PMID:2911593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: protein A; Residues: 1-80 <GOR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Gorevic, P.D.; Greenwald, M.; Frangione, B.; Pras, M.;
J. Immunol. 118, 1113-1118, 1977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               apolipoprotein B - rat (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Accession:
                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ccession: I59148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                    74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NYDA 4
preliminary;
                                                                                                                                                                                                                                                                                  NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NYDA 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NYDA
                                                                                                                                                                                                                                                                                                                                                         4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A03200
                                                                                                                                                                                                                                                                                    77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44
                                                                                                                                                                                                                                                                                                                                                               100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                         #sequence_revision
translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                       02-Aug-1996 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                      23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                  1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB
                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Franklin,
                                                                                                                                                                                                                                                                                                                                                                                                      0.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80
                                                          Evolutionary implication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and lower- molecular wei
                                                                                                                                       20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E.C.
                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              low yield
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the
                  В
```

```
Qγ
                                                                                                           C;Comment: The extracellular deposits formed by this protein are highly insoluble C;Superfamily: amyloid protein C;Keywords: amyloid
                                                                                                                                                                                                                                                                                                                                                          amyloid protein AA - cat
C;Species: Felis silvestris catus (domestic cat)
C;Date: 30-Sep-1990 #sequence_revision 30-Sep-1990 #text_change 11-May-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Nolling, J.; Breton, G.; Omelchenko, M.V.; Markarova, K.S.; Daly, M.J.; Bennett, G.N.; Koonin, E.V.; Smith, D.R. J. Bacteriol. 183, 4823-4838, 2001
A;Title: Genome Sequence and Comparative Analysis of the Solve A;Reference number: A96900; MUID:21359325; PMID:21359325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hypothetical protein CAC1877 [imported] - Clostridium acetobutylicum C;Species: Clostridium acetobutylicum C;Decies: C4-Sep-2001 #sequence_revision 14-Sep-2001 #text_change 14-Sep-2001 C;Accession: F97131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Introns: 38/3
C; Superfamily:
                                                                                                                                                                                                                      A; Molecule type: protein A; Residues: 1-90 < KLU>
                                                                                                                                                                                                                                                      A; Reference number: A; Accession: JL0111
                                                                                                                                                                                                                                                                         R;Kluve-Beckerman, B.; Dwulet, F.E.; DiBartola, S.P.; Benson, I Comp. Biochem. Physiol. B 94, 175-183, 1989
A;Title: Primary structures of dog and cat amyloid A proteins: A;Reference number: JL0110; MUID:90091422; PMID:2598632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: GB:AE001437; PIDN:AAK79841.1; A;Experimental source: Clostridium acetobutylicum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-85 < KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Reference number: A; Accession: F97131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: GB:M17790; NID:g200920; PIDN:AAA40089.1; PID:g200921 C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-83 < RES>
                                                                                                                                                                                                     A; Note:
                                                                                                                                                                                                                                                                                                                                                  C; Accession: JL0111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20 NYDA 23
                                                      Local
   -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                     no overlap was shown between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAC1877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NYDA 4
   NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NYDA
                                                                                                                                                                             overlap was shown between residues 88 and 89 This protein is the main constituent of reactive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        38/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4;
                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; ilarity 100.0%; Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; ilarity 100.0%; Conservative
                                     llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
Pred
                                     Score 23; DB 1;
Pred. No. 1.3e+02;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23; DB 2;
Pred. No. 1.2e+02;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .2e+02;
s 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PID:g15024856; GSPDB:GN00168
ATCC824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                       Length 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 83
                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Solvent-Producing Bacterium
                                                                                                                                                                                  amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zeng, Q.; Gibson,
                                                                                                                                                                                                                                                                                              comparison to
                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                      fibrils
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                       Gaps
                                                                                                                                                                                      ŗ.
                                       0;
                                                                                                                                                                                                                                                                                                 human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                 A
```

40

```
A;Accession: A;Accession: A;Accession: A;Poes protein
A;Molecule type: protein
A;Residues: 4-16 <AUS>
A;Experimental source: amyloid fibrils, kidney
A;Experimental source: amyloid fibrils, kidney
A;Note: An identical fragment was sequenced from its precursor molecule serum
A;Note: An identical fragment was sequenced from its precursor molecule serum
A;Note: An identical fragment was sequenced. B.W.
A;Note: An identical fragment was sequence analysi:
                                                                                              A;Cross-references: EMBL:Z50803; NID:g950054; PIDN:CAA90685.1; PID:g950056
C;Superfamily: phosphotransferase system phosphohistidine-containing protein; phosphotransferase
C;Keywords: phosphocarrier protein; phosphohistidine; phosphoprotein; phosphotransferase
F;9-86/Domain: phosphotransferase system phosphohistidine-containing protein homology <i
F:16/Binding site: phosphate (His) (covalent) (by phosphotransferase system enzyme I) #s
F:48/Binding site: phosphate (Ser) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Superfamily: amyloid protein
C;Keywords: acute phase; amyloid; pyroglutamic
F;1/Modified site: pyrrolidone carboxylic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Comment: The extracellular deposits formed by this C; Superfamily: amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: protein A; Molecule type: protein A; Molecule type: protein A; Residues: 3, 'X', 5-9, 'X', 11-13, 17-20, 'X', 22-23, 'X', 25-28, 'Y', 30-32, 'X', 34-48 <WES> C; Comment: This protein is derived from the acute phase protein serum amyloid A (SA C; Comment: This protein is the main constituent of reactive amyloid fibrils in man
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R:Westermark, P.; Johnson, K.H.; Westermark, G.T.; Sletten, I Comp. Biochem. Physiol. B 85, 609-614, 1986
A;Title: Bovine amyloid protein AA: isolation and amino acid A;Reference number: A61108; MUID:87079535; PMID:3791962
A;Accession: A61108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: protein A;Residues: 1-90 <BEN 5, Sletten, K.; Skogen, B.; Nordstoga R:Husebekk, A.; Husby, G.; Sletten, K.; Skogen, B.; Nordstoga Scand. J. Immunol. 27, 739-743, 1988
A;Title: Characterization of bovine amyloid proteins SAA and A;Reference number: A60910, MUID:88277778; PMID:3393848
A;Accession: A60910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Benson, M.D.; DiBartola, S.P.; Dwulet, F.E. J. Lab. Clin. Med. 113, 67-72, 1989
A;Title: A unique insertion in the primary structure of A;Reference number: A60952; MUID:89080450; PMID:2909653
A;Accession: A60952
                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-90 <MER>
                                                                                                                                                                                                                                                                                                                                                                                                       R;Merrick, M.J.; Taylor, M. submitted to the EMBL Data Library, August 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   phosphotransferase system phosphohistidine-containing protein -
N;Alternate names: phosphotransferase protein HPr
C;Species: Klebsiella pneumoniae
C;Date: 19-Jul-1996 #sequence_revision 31-Jan-1997 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Bos primigenius taurus (cattle)
C;Date: 03-Mar-1994 #sequence_revision 03-Mar-1994 #text_change 11-May-2000 C;Accession: A60952; A60910; A61108
                                                                                                                                                                                                                                                                                                           A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                  A; Reference number: A; Accession: S60667
                                                                                                                                                                                                                                                                                                                                                                                       A; Description:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amyloid protein AA -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Accession: S60667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NYDA 4
                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                    Sequence and
     100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                  characterisation of distal genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
       0;
                            Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 23;
Pred. No.
       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.3e+02;
     1.3e+02;
es 0;
                                                       DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Gln) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nordstoga,
                                                 Length 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein are highly insoluble and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 90;
       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bovine amyloid AA protein.
                                                                                                                                                                                                                                                                                                                                                                                    'n
                                                                                                                                                                                                                                                                                                                                                                                  the Klebsiella pneumonia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Klebsiella pneumoniae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
     0
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A (SAA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amyloid
                                                                                                                                # 4
                                                                                                                        hypothetical protein homolog lin2859 [imported] - Listeria innocua C;Species: Listeria innocua C;Species: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 27-
  D.; Jones, L
Science 294,
                                                                            C;Accession: AE1789
R;Glaser, P.; Frangeul, L.;
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Introns:
C; Superfami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                          AE1789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R5YM23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 171950
                                               .; Dominguez-Bernal, G.;
                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Superfamily:
                                                                                                                                                                                                                                                                                                           57 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rp123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NYDA
L.M.; Karst,
4, 849-852, 20
```

```
A; Genetic code: SGC3
C; Superfamily: Escherichia
C; Keywords: protein biosynt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: I55984; MUID:87309776; PMID:362486 A; Accession: I71950 A:Status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    serum amyloid A - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 02-Aug-1996 #sequence_revision
C;Accession: I71950
                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-94 < OHK>
                                                                                                                                                                                                                                                                                           R;Ohkubo, S.; Muto, A.; Kawauchi, Y.; Yamao, F.; Osawa, S
Mol. Gen. Genet. 210, 314-322, 1987
A;Title: The ribosomal protein gene cluster of Mycoplasma
A;Reference number: S02830; MUID:88142549; PMID:3481422
                                                                                                                                                                                                                                                                                                                                C;Accession: S02833
R;Ohkubo, S.; Muto, A.; Kawauchi,
Mol. Gen. Genet. 210, 314-322, 19
                                                                                                                                                                                                                                                                                                                                                                                   C;Species: Mycoplasma capricolum
C;Date: 31-Dec-1990 #sequence_revision 31-Dec-1990 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-91 <RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R; Yamamoto, K.
J. Immunol. 139, 1683-1688, 1987
A; Title: Structural diversity of
                                                                                                                                                                                                                         A; Cross-references: EMBL: X06414; NID: g44207;
                                                                                                                                                                                                                                                                               A; Accession: S02833
                                                                                                                                                                                                                                                                                                                                                                                                                    ribosomal protein L23 - Mycoplasma capricolum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Status: preliminary; translated from GB/EMBL/DDB.
                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NYDA 4
                                                                   4;
                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                     biosynthesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GB:M17792; NID:g200917; PIDN:AAA40088.1; PID:g200919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                  100.0%;
                                                                                                                                                      coli ribosomal
                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                   Score 23; DE
Pred. No. 1.3
0; Mismatches
                                                                                                                                     ribosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-Aug-1996 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.
                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         +um amyloid A
PMID:3624868
                                                                                                                                                                                                                         PIDN:CAA29706.1; PID:g44211
                                                                                  1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.3e+02;
                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DВ
                                                                                                 Length 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Evolutionary implicati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                                     07-Dec-1999
                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                   Gaps
                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

Duchaud,

. .

Durand,

Amend, d, L.; [

Dussurget,

Baquero, I surget, O.;

F.; Berche, ; Entian, K.

Bloec

#text_change 27-Nov-2001

(strain

Clip11262;

Buchrieser,

ი:,

X :.

Kunst,

म :

Kurapkat,

G.;

Madueno,

E.; Maitournam,

```
C;Superfamil
C;Keywords:
                                                                                                                     A; Experimental source: C; Superfamily: amyloid
                                                                                                                                                                                                                                                                        amyloid protein A - duck
C:Species: Anas platyrhynchos (domestic duck)
C:Date: 21-May-1988 #sequence_revision 21-May-1988 #text_change
C:Accession: A27227; A32538
Š
                                                                                                                                                                                       A; Title: Primary structure of duck amyloid protein A. The A; Reference number: A27227; MUID:87247238; PMID:3109944 A; Accession: A27227
                                                                                                                                                                                                                                           R;Ericsson, L.H.; Eriksen, N
FEBS Lett. 218, 11-16, 1987
                                                                                                                                                        A; Molecule type: protein A; Residues: 1-106 < ERI>
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;1-64/Product: amyloid protein A, amyloid (long form) #status experimental F;1-53/Product: amyloid protein A, amyloid (short form) #status experimental
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Note: 10-Val, 67-Val, and 71-Phe were also found
C; Superfamily: amyloid protein
C; Keywords: amyloid; pyroglutamic acid
F;1-103/Product: amyloid protein A, serum #status experimental <MATI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            c;Species: Mustela vison (American mink c;Species: Mustela vison (American mink) C;Date: 29-Jan-1993 #sequence_revision 29-Jan-1993 #text_change C;Accession: S06386 R;Syversen, V; Sletten, K; Marhaug, G.; Husby, G.; Lium, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ok, C.; Schlueter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.; Voss, H.; Wehland, A;Title: Comparative genomics of Listeria species. A;Reference number: AB1077; MUID:21537279; PMID:11679669
A;Accession: AE1789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: protein A; Residues: 1-103 <SYV>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scand. J. Immunol. 26, 763-767, 1987

A; Title: The amino acid sequence of serum amyloid A (SAA) protein A; Reference number: S06386; MUID:88099357; PMID:3423742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:AL592022; PIDN:CAC98085.1; A;Experimental source: strain Clip11262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-100 <GLA>
                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: S06386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Status: preliminary
                                  Matches
                                                   Best Local
                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>3</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1in2859
NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                             NYDA 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                            NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NYDA 34
                                                                                                      amyloid
                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sletten, K.; Marhaug, G.; Husby, G.; Lium, ol. 26, 763-767, 1987
                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                   Pekin breed protein
                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100
                                                                                                                                                                                                                                                             N.; Walsh, K.A.; Benditt,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .0%;
                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                           Score 23; DB 2;
Pred. No. 1.5e+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 23; DB 2;
Pred. No. 1.5e+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 1.4e+02; thes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PID:g16415394; GSPDB:GN00178
                                                                                                                                                                                                                                                             E.P.
                                                              Length 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 100
                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                            form
                                                                                                                                                                                                                          deposited
                                                                                                                                                                                                                                                                                                23-Mar-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-Aug-1994
                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in
                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                          'n
                                                                                                                                                                                                                          tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <MAT2>
                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <MAT3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                          may
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
```

```
A; Molecule type: protein
A; Residues: 1-108 <WIL>
C; Superfamily: human ubiquitin thiolesterase
A;Title: The genome sequence of the plant pathogen Xylella fastidiosa A;Reference number: A82515; MUID:20365717; PMID:10910347 A;Note: for a complete list of authors see reference number A59328 being the complete sequence of the plant pathogen Xylella fastidiosa A;Note: for a complete list of authors see reference number A59328 being Note:
                                                                                                                   hypothetical protein XFa0018 [imported] - Xylella fastidiosa (strain 9a5c) C;Species: Xylella fastidiosa C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 20-Aug-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; (ccession: B40085 R.Wilkinson, K.D.; Lee, K.; Deshpande, S.; Duerksen-Hughes, Science 246, 670-673, 1989 A:Title: The neuron-specific protein PGP 9.5 is a ubiquitin A:Reference number: A40085; MUID:90049185; PMID:2530630 A:Accession: B40085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ubiquitin carboxyl-terminal proteinase b
C:Species: Bos primigenius taurus (cattle)
C:Date: 20-Mar-1992 #sequence_revision 20-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Nolecule type: DNA
A; Rolecule type: DNA
A; Residues: 1-106 <GLA>
A; Cross-references: GB: NC_003210;
A; Cross-references: GB: NC_003210;
                                                                R;anonymous, The Xylella fastidiosa Nature 406, 151-157, 2000
                                                                                                       C; Accession:
                                                                                                                                                                                        B82863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Dominguez-Bernal, G.; Duchaud, E.; Durand, L.; Dussurget, O.; F.

Jones, L.M.; Karst, U.

Science 294, 849-852, 2001

A; Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno, ok, C.; Schlueter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.

A; Title: Comparative genomics of Listeria species.

A; Reference number: AB1077; MUID:21537279; PMID:11679669

A; Accession: AF1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                hypothetical proteins homolog lmo2711 [imported] -
;Speciles: Listeria monocytogenes
C;Date: 27-Nov-2001 #sequence_revision 27-Nov-2001
C;Accession: AF1413
R;Glaser, P.; Frangeul, L.; Buchrieser, |C.; Amend.
                                                                                                                                                                                                                RESULT 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B40085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                          68 NYDA
                                                                                                                                                                                                                                                                                               1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31 NYDA 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lmo2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NYDA 4
                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                           4.
                                                                                                           B82863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                            71
                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIDN:CAD00924.1;
                                                                                                                                                                                                                                                                                                                                                                          Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
Pred
                                                                                   Consortium
                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             r, |C.; Amend, A.; Baquero, F.; Berche, P. Durand, L.; Dussurget, O.; Entian, K.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-Mar-1992 #text_change 11-Jan-2000
                                                                                                                                                                                                                                                                                                                                                                            23; E
No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bovine (fragments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                   0f
                                                                                                                                                                                                                                                                                                                                                                            .6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                   the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PID:g16412211; GSPDB:GN00177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Listeria monocytogenes (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #text_change 27-Nov-2001
                                                                                                                                                                                                                                                                                                                                                                                             Length 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 106;
                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P.,
  A59328 below
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 carboxyl-terminal hydrola
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O, E.; Maitournam,
J.A.; Voss, H.; W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Boss, J.M.; Pohl,
                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                   for
                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                   Nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽.,
                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Bloec
Fsihi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             m, A.;
Wehla
                                                                                 Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EGD
```

```
C; Species: Canis lupus ramaria..., C; Species: Canis lupus ramaria..., C; Date: 21-Feb-1992 #sequence_revision 21-Feb-1992 #text_cnange and C; C; Accession: B38645
C; Accession: B38645
R; Sellar, G.C.; DeBeer, M.C.; Lelias, J.M.; Snyder, P.W.; Glickmand J. Biol. Chem. 266, 3505-3510, 1991
J. Biol. Chem. 266, 3505-3510, 1991
A; Title: Dog serum amyloid A protein. Identification of multiple and protein. Identification and protein. Iden
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Simpson, A.J.G.; Reinach, F.C.; Arruda, P.; Abreu, F.A.; Acencio, M.; Alvarenga, R.; Abriones, M.R.S.; Bueno, M.R.P.; Camargo, A.A.; Camargo, L.E.A.; Carraro, D.M.; Carrer, H. as-Neto, E.; Docena, C.; El-Dorry, H.; Facincani, A.P.; Ferreira, A.J.S. submitted to GenBank, June 2000

A;Authors: Ferreira, V.C.A.; Ferro, J.A.; Fraga, J.S.; Franca, S.C.; Franco, M.C.; Frohm J.D.; Junqueira, M.L.; Kemper, E.L.; Kitajima, J.P.; Krieger, J.E.; Kuramae, E.E.; Laigrichado, M.A.; Madeira, A.M.B.N.; Madeira, H.M.F.; Marino, C.L.; Marques, M.V.; Martins, E.A;Authors: Martins, E.M.F.; Matsukuma, A.Y.; Menck, C.F.M.; Miracca, E.C.; Miyaki, C.Y.; F.G.; Nunes, L.R.; Oliveira, M.G.; de Oliveira, R.C.; Palmiteri, D.R. Rodrigues, V.; Rosa, A.J. de M.; de Rosa Jr., V.E.; de Sa, R.G.; Santelli, R.V.; Sawasak A;Authors: da Silva, A.C.R.; da Silva, F.R.; da Silva, A.M.; Silva Jr., W.A.; da Silveira, M.S.; Vettore, A.L.; Zapfersore, M.S.; Veltore, A.L.; Zapfersore, M
                                                                                                                                                                                                                                                                                                                                                           C:Species: Mus musculus (house mouse)
C:Date: 19-Mar-1998 #sequence_revision 19-Mar-1998 #text_change 20-Jun-2000
C:Accession: S26323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-recerring amyloid C;Superfamily: amyloid
                                                                                                                                          R:Stark S.E.; Caton, A.J.
J. Exp. Med. 174, 613-624,
A:Title: Antibodies that ar
A; Reference number: $26309;
A; Accession: $26323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: A38645; MUID:91139635; A; Accession: B38645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: GB:AE003851; N:
A;Experimental source: strain 9a5c
A; Residues: \bar{1}-110 <STA> A; Cross-references: EMBL:X59184; NID:g52061; PIDN:CAA41894.1;
                                                 A; Molecule type: mRNA
A; Residues: 1-110 <STA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 1-109 <SE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Note: plasmid pxF5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Reference number: A59328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Residues: 1-108 <SIM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ig heavy chain V region -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Gene: XFa0018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Contents: annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             myloid A-like protein DSAA18 precursor -
C;Species: Canis lupus familiaris (dog)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SULT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Residues: 1-109 <SEL>
Cross-references: GB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genome: plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                / Match 100.0%;
Local Similarity 100.0%;
pes 4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  76 NYDA 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GB:M59172; NID:g164061; PIDN:AAA62763.1; PID:g164062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                 are specific for a single amino 09; MUID:91341421; PMID:1908510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mouse (fragment)
                                                                                                                                                                                                                                                                                               1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NID:g9112238; PIDN:AAF85587.1; GSPDB:GN00130; XFSC:XFa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 23; DE Pred. No. 1.6); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 23; DB 2;
Pred. No. 1.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-Feb-1992 #text_change 20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    dog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĎΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P.W.; Glickman, L.T.; Felsburg, P.J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                   acid
    PID:g1334033
                                                                                                                                                                                                                                              interchange
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              isoforms defined by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                   in
                                                                                                                                                                                                                                              þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDN
```

```
Scand. J. Immunol. 26, 79-84, 1987, A.; Husby, G.
Scand. J. Immunol. 26, 79-84, 1987
A;Title: The amino acid sequence of an amyloid fibril protein A;Peference number: A28573; MUID:87291864; PMID:3616485
A;Molecula trans
                                                                                                                                                                                                                                                                                                                     hypothetical protein 2C334.1 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: protein
A;Residues: 1-15, 'L',17-77,' ABZ' <SL2>
A;Residues: 1-15, 'L',17-77,' ABZ' <SL2>
A;Note: 44-Cln was also found; the order of residues 78-79 was uncertain C;Comment: Serum amyloid A protein was found to be complexed to HDL in ac C;Superfamily: amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Sletten, K.; Husebekk, A.; Husby, G. Scand. J. Immunol. 30, 117-122, 1989
A;Title: The primary structure of equine serum amyloid a A;Reference number: A60430; MUID:89332320; PMID:2502829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               serum amyloid A protein - horse N;Contains: amyloid protein AA C;Species: Equus caballus (domestic hor C;Date: 19-Nov-1988 #sequence_revision C;Accession: A60430; A28573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Superfamily: immunoglobulin V region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin F;6-87/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;1-110/Product: serum amyloid A protein *status experimental F;1-80/Product: amyloid protein A *status experimental <MAT1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                           A; Map position:
                                                                                             A; Gene: CESP: ZC334.1
                                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-110 <WIL>
                                                                                                                                                                                                                          A; Reference number: A; Accession: T27515
                                                                                                                                                                                                                                             submitted to the EMBL Data A; Reference number: Z20381
                                                                                                                                                                                                                                                                                    R; McLay,
                                                                                                                                                                                                                                                                                                  C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: protein A; Residues: 1-110 <SLE>
                                                                                                                                A; Experimental source:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: A60430
                                                                                                                                                     A;Cross-references:
                                                                                                                                                                                                      A; Status: preliminary; translated
                                                                                                                Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                       39 NYDA 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93 NYDA 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                  EMBL: z82082; Pce: clone zC334
                                                                                                                                                                                                                                                                                                                       #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
 100
                                                                                                                                                                                                                                                               Library, November 1996
 . 0 %
                                                                                                                                                     PIDN:CAB04962.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 23;
Pred. No.
                                                                                                                                                                                                          from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
Pred.
 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 horse)
ion 12-Feb-1993 #text_change 17-Mar-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                          GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23;
No.
   23;
No.
 DB 2;
1.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .6e+02;
                                                                                                                                                     GSPDB:GN00019; CESP:ZC334.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (SAA) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <MAT2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA isolated from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              phase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
```

ò

```
amyloid A protein DSAA85 precursor - dog (fragment)
C;Species: Canis lupus familiaris (dog)
C;Date: 21-Feb-1992 #sequence_revision 21-Feb-1992 #text_change 20-Aug-1999
C;Accession: D38645
R;Sellar, G.C.; DeBeer, M.C.; Lelias, J.M.; Snyder, P.W. Clicker, J. Biol. Chem. 266, 3505-2510
amyloid A protein DSAA86 precursor - dog (fragment) C;Species: Canis lupus familiaris (dog) C;Date: 21-Feb-1992 #sequence_revision 21-Feb-1992 C;Accession: E36645 R;Sellar, G.C.; DeBeer, M.C.; Lelias, J.M.; Snyder, J. Biol. Chem. 266, 3505-3510, 1991
                                                                                                   RESULT 24
E38645
                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                         J. Biol. Chem. 266, 3505-3510, 1991
A;Title: Dog serum amyloid A protein. Identification of multiple isoforms defined by cDN
A;Reference number: A38645; MUID:91139635; PMID:1995613
                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Reference number: A; Accession: AG1646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, ok, C.; Schlueter, T.; Simoes, N.; Tlerrez, A.; Vazq A; Title: Comparative genomics of Listeria species, A; Reference number: AB1077; MUID:21537279; PMID:1167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Listeria innocua
C;Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change
C;Accession: AG1646
                                                                                                                                                                                                                                                                                                                                                                      A; Accession: D38645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Science 294, 849-852,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Glaser, P.; Frangeul, L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical
                                                                                                                                                                                                                                                                                   Molecule type: mRNA
Residues: 1-116 <SEL>
Cross-references: GB:M59174;
Superfamily: amyloid protein
                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                       Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dominguez-Bernal, G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jones,
                                                                                                                                                                45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29
                                                                                                                                                                                                                           Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79
                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lin1712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             μ
                                                                                                                                                                NYDA 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NYDA 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NYDA 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  L.M.; Karst,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein lin1712 [imported] -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Duchaud,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Buchrieser, C.; Auchaud, E.; Durand,
                                                                                                                                                                                                                                                                                                    NID:g164065; PIDN:AAA62765.1; PID:g164066
                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIDN:CAC96943.1; PID:g16414199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                          Score 23; DI
Pred. No. 1.7
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 23; DB 2; Pred. No. 1.6e+02;
                J.M.; Snyder, P.W.; Glickman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                          21-Feb-1992 #text_change 20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Listeria innocua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PMID:11679669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amend,
d, L.;
                                                                                                                                                                                                                                        DB 2;
1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vazquez-Boland, J.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dussurget,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A.;
                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                      Length 116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baquero, Furget, O.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (strain Clip11262)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F.; Berch; Entian,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-Nov-2001
                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSPDB:GN00178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                L.T.; Felsburg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Berche, P.;
tian, K.D.;
                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maitournam, A.; M
Voss, H.; Wehland
                                                                                                                                                                                                                                                                                                                                                                                                                              Felsburg,
                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Bloecker
Fsihi, H.
                P.J
                                                                                                                                                                                                                                                                                                                                                                                                                                  P. J
```

```
A; Starre A; Molecule type: 1
A; Residues: 1-119 <STO>
A; Cross-references: GB:AP000398; GSPDB:GN00144
                                                                                                                                                                                                                                                                                                              A; Status: preliminary
                                                                                                                                                        A; Title: Genome sequence A; Reference number: A8493
                                                                                                                                                                                                                      R;Shigenobu, S.; Watanai
Nature 407, 81-86, 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;1-8/Domain: signal sequence (fragment)_{\parallel} *status predicted F;9-101/Product: amyloid protein AA *status experimental <>F;9/Modified site: pyrrolidone carboxylic acid (Gln) (in maximum control of the control of 
                                                                                                                           A; Accession: H84991
                                                                                                                                                                                                                                                                                 C; Accession: H84991
                                                                                                                                                                                                                                                                                                                                                                                                                   H84991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Keywords: amyloid; pyroglutamic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Superfamily: amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Comment: The extracellular deposits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Comment: This protein is the main constituent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: protein A; Residues: 9-101 <KLU>A; Note: 25-Trp was also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: GB:M59171; NID:g164059; PIDN:AAA62762.1; PID:g164060 R;Kluve-Beckerman, B.; Dwulet, F.E.; DiBartola, S.P.; Benson, M.D. Comp. Biochem. Physiol. B 94, 175-183, 1989 A;Title: Primary structures of dog and cat amyloid A proteins: comparison A;Reference number: JL0110; MUID:90091422; PMID:2598632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Sellar, G.C.; DeBeer, M.C.; Lelias, J.M.; Snyder, P.W.; Glickman, L.T.; Felsburg, J. Biol. Chem. 266, 3505-3510, 1991
A;Title: Dog serum amyloid A protein. Identification of multiple isoforms defined by A;Reference number: A38645, MUID:91139635, PMID:1995613
A;Accession: A38645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amyloid protein AA precursor (clone DSAA15) - dog (fragment)
C;Species: Canis lupus familiaris (dog)
C;Date: 30-Sep-1990 #sequence_revision 12-Apr-1996 #text_change 11-May-2000
C;Accession: A38645; JL0110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:M59175; NID:g164067; C;Superfamily: amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-119 <SEL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Reference number: A; Accession: E38645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Title: Dog serum amyloid A protein. Identification of multiple isoforms defined A; Reference number: A38645; MUID:91139635; PMID:1995613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: JL0110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Residues: 1-116 <SEL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     45 NYDA 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                   S.; Watanabe, H.; Hattori,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                            A84930;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             found
                                                                                                                                                                                         of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                            the endocellular bacterial symbiont of aphids Buchnera MUID:20445173; PMID:10993077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     formed
                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.
                                                                                                                                                                                                                                                       Sakaki,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIDN:AAA51457.1; PID:g164068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2; I
1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
                                                                                                                                                                                                                                                                                                                                                                               (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of reactive amyloid fibrils
                                                                                                                                                                                                                                                                                                              #text_change 02-Mar-2001
                                                                                                                                                                                                                                                       Y.; Ishikawa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (in mature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         form)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              highly insoluble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         experim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               man
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bу
                                                                                                                                                                                         дs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ש
```

```
R;Sellar, G.C.; DeBeer, M.C.; Lelias, J.M.; Snyder, P.W.; Glickman, L.T.; Felsburg, P.J. J. Biol. Chem. 266, 3505-3510, 1991
A;Title: Dog serum amyloid A protein. Identification of multiple isoforms defined by cDN A;Reference number: A38645; MUID:91139635; PMID:1995613
A;Accession: C38645
A;Status: preliminary
A:Molecule +-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              amyloid A protein DSAA32 precursor - dog (fragment)
C; Species: Canis lupus familiaris (dog)
C; Date: 21-Feb-1992 #sequence_revision 21-Feb-1992 #text_change 20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Experimental source: C; Genetics: A; Gene: yheM; BU531
  A;Cross-references: EMBL:X51439; NID:g36311; PIDN:CAA35804.1; PID:g825714
A;Experimental source: clone pAS1
A;Note: allele saa1*1 / ^***
                                                                                                                                                                                                                                                                                                                                     A;ACCession....A; Meiss, E.H.; Schwaeble, W.; Linke, R.P.

A;Cross-references: GB:M10906; NID:g337747; PIDN:AAA60297.1; PID:g337748

A;Cross-references: GB:M10906; NID:g337747; PIDN:AAA60297.1; PID:g337748

A;Cross-references: GB:M10906; NID:g337747; PIDN:AAA60297.1; PID:g337748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Human serum amyloid A (SAA): biosynthesis and postsynthetic processing of preSi
A;Reference number: A22342; MUID:85252712; PMID:3839415
A;Contents: allele SAA1*1 (SAA1-alpha)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Species: Homo sapiens (man)
C;Date: 15-Oct-1982 #sequence_revision 08-Feb-1996 #text_change 08-Dec-2000
C;Accession: A22342; S09972; S09974; S09977; S09978; S12491; S12492; S20103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     serum amyloid Al protein precursor [validated] - N;Alternate names: amyloid-related serum protein N;Contains: amyloid protein AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                              R;Steinkasserer, A.; Weiss, E.H.; Schwaeble, W.; Linke, F. Biochem. J. 268, 187-193, 1990
A;Title: Heterogeneity of human serum amyloid A protein: A;Reference number: S09972; MUID:90262544; PMID:1971508
A;Accession: S09972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;S1pe, J.D.; Colten, H.R.; Goldberger, G.; Edge, M.D.; Tack, B.F.; Cohen, A.S.; Whiteh Biochemistry 24, 2931-2936, 1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-121 <SEL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C38645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                   A;Experimental source: clone pAS4
A;Note: allele SAA1*1 (SAA1-alpha)
                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 8-72 <STE>
                                                                                                                              A; Accession: S09974
                                                                                                                                                                                                       A;Cross-references: EMBL:X51443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cross-references: GB:M59173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                112 NYDA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NYDA 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A22342
source: clone pASI
SAA1*1 (SAA1-alpha)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NID:g164063; PIDN:AAA62764.1; PID:g164064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 23; DB 2;
Pred. No. 1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23; DB 2;
Pred. No. 1.8e+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 119;
                                                                                                                                                                                                                                                                                                                                five
                                                                                                                                                                                                                                                                                                                                different variants from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A9
```

```
A; Molecule type: protein
A; Residues: 19-40, 'N', 42-77, 'N', 79-92, 'N', 94-122 <SLE>
A; Residues: 19-40, 'N', 42-77, 'N', 79-92, 'N', 94-122 <SLE>
A; Note: at least three polymorphic forms of this protein have leucine are found at position 76
R; Prelli, F.; Pras, M.; Frangione, B.
Biochemistry 26, 8251-8256, 1987
A; Title: Degradation and deposition of amyloid AA fibrils are A; Reference number: A29419; MUID:88163487; PMID:3442653
A; Contents: allele SAA1*1 (SAA1-alpha)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Note: this protein was isolated from the high-density lipoprotein fraction R;Sletten, K; Marhaug, G.; Husby, G. R;Sletten, K; Marhaug, G.; Husby, G. Roppe-Seyler's Z. Physiol. Chem. 364, 1039-1046, 1983
A;Title: The covalent structure of amyloid-related serum protein SAA from two A;Reference number: A91711; MUID:84030495; PMID:6629328
A;Contents: allele_SAA1*1 (SAA1-alpha)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: protein
A;Residues: 19-94 <SKI>
A;Residues: 19-94 <SKI>
R;Parmelee, D.C.; Titani, K.; Ericsson, L.H.; Eriksen, N.; Benditt, E.P.; Walsh, K.A.
Biochemistry 21, 3298-3303, 1982
Biochemistry 21, 3298-3303, 1982
A;Title: Amino acid sequence of amyloid-related apoprotein (apoSAA-1) from human high
A;Reference number: A90461; MUID:83000248; PMID:7115671
A;References and the company of the company 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-69,'A',71-74,'V',76-122 <BET>
A;Residues: 1-69,'A',71-74,'V',76-122 <BET>
A;Cross-references: EMBL:X56652; NID:g36307; PIDN:CAA39974.1; PID:g36308
A;Skinner, M.; Pinnette, A.; Travis, W.D.; Shwachman, H.; Cohen, A.S.
J. Lab. Clin. Med. 112, 413-417, 1988
J. Lab. Clin. Med. 112, 413-417, 1988
A;Title: Isolation and sequence analysis of amyloid protein AA from a para, Reference number: A60863; MUID:89010280; PMID:3171350
A;Contents: allele SAA1*1 (SAA1-alpha)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 73-74, 'V', 76-77, 'N', 79-122 <LI2>
A; Cross-references: EMBL: x51441; NID: g36313; I
A; Experimental source: clone pAS3-alpha
R; Betts, J.C.; Edbrooke, M.R.; Thakker, R.V.;
Scand, J. Immunol. 34, 471-482, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Linke, R.P.
submitted to the EMBL Data
submitted to number: S12491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 73-74, 'V', 76-77, 'N', 79-122 <ST3>
A; Cross-references: EMBL: X51442; NID: 936314;
A; Experimental source: clone pAS3-beta
A; Note: a variant of allele SAA1-beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: protein
A;Residues: 19-122 <PAR>
A;Note: 70-Ala and 75-Val were also found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Title: The human acute-phase serum amyloid A gene family: A;Reference number: S20103; MUID:92022342; PMID:1656519 A;Contents: allele SAA1*2b (SAA1-beta) A;Accession: S20103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Experimental source: clone pAS4
A; Note: allele SAA1*1 (SAA1-alpha)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: mRNA
A; Residues: 73-77, 'N', 79-122 <ST4>
A; Cross-references: EMBL: X51441
A; Molecule type: protein A; Residues: 20-100 < PRE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: A90461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 8-69, 'LG' <LIN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: S09977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: A91711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: S12492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Experimental source: clone pAS3-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: S09978
                                                                                                                        A; Accession: A29419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: A60863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: EMBL:X51443; NID:g36315; PIDN:CAA35808.1; PID:g939926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: S12491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 January
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIDN:CAA35807.1; PID:g825717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIDN: CAA35806.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Woo,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            structure,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              been
                                                                                                                                                                                                                                                                                         tissue specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PID: 9825716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              found in a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                patient with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            evolution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      two
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                patient
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              patient
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       serum
```

сy

R; Westermark, G.

ol. 30, 605-613,

Westermark,

H

```
A; Molecule type: protein
A; Molecule type: protein
A; Molecule type: protein
A; Residues: 65-69, 'A', 71-80 <BA2>
A; Experimental source: amyloid fibrils, thyroid gland of rheumatoid arthritis patient
A; Note: sequence extracted from NCBI backbone (NCBIP:121042)
A; Moyner, K.; Sletten, K.; Husby, G.; Natvig, J.B.
Scand. J. Immunol. 11, 549-554, 1980
A; Title: An unusually large (83 amino acid residues) amyloid fibril protein AA from a
A; Reference number: A94234; MUID:80213886; PMID:6155694
A; Molecule type: protein
A; Residues: 19-29 <GOR>
R; Uhlar, C.M.; Burgess, C.J.;
                                                                                                                                                                                         A; Title: Systemic senile amyloidosis. Identification of a
                                                                                                                                                                                                                          A:Accession: A90195
A:Molecule type: protein
A:Molecule: 19·40, 'N',42-77,'N',79-82 <SL2>
A:Residues: 19·40, 'N',42-77,'N',79-82 <SL2>
A:Note: 19-Arg is missing from some of the molecules
A:Note: this protein is from a patient with ankylosing spondylitis
R:Gorevic, P.D.; Prelli, F.C.; Wright, J.; Pras, M.; Frangione, B.
J. Clin. Invest. 83, 836-843, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                            A: Molecule type: protein
A: Residues: 19-40, 'N', 42-92, 'N', 94 <SL3>
A: Residues: 19-40, 'N', 42-92, 'N', 94 <SL3>
A: Rote: this protein is from a patient with juvenile rheumatoid arthritis R: Sletten, K.; Husby, G.; Natvig, J.B.
Blochem. Biophys. Res. Commun. 69, 19-25, 1976
A: Title: The complete amino acid sequence of an amyloid fibril protein AA: Reference number: A90195; MUID: 76160745; PMID: 1259755
A: Contents: J1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Title: The complete amino-acid sequence of non-immunoglobulin amyloid fibril A;Reference number: A91215; MUID:74120351; PMID:4816450 A;Contents: Th
                                                                                                        A; Accession:
                                                                                                                                   A; Reference number: A30323;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: protein
A; Residues: 19-40, 'N', 42-83, 'E', 85-92, 'N', 94-95, 'SEATVK' <
A; Note: 70-Ala and 71-Arg were also found
A; Note: this protein is from a patient with Waldenstrom's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Residues: 19-69, A',71-122 <BAB>
R; Baba, S.; Takahhashi, T.; Kasama, T.; Shirasawa, H.
Biochim. Biophys. Acta 1180, 195-200, 1992
A; Title: Identification of two novel amyloid A protein s
A; Reference number: A56867; MUID:93099171; PMID:1463770
A; Contents: allele_SAA1-gamma (allele 52,57-Ala)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Sletten, K.; Husby, G.
Eur. J. Biochem. 41, 117-125, 1974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: protein
A;Residues: 20-69, A',71-74,'V',76-89,'D',91-122 <BE2>
A;Residues: 20-69, A',71-74,'V',76-89,'D',91-122 <BE2>
A;Residues: 20-69, A',71-74,'V',76-89,'D',91-122 <BE2>
A;Rehaa, S.; Takahashi, T.; Kasama, T.; Fujie, M.; Shirasawa, H.
Arch. Biochem. Biophys. 303, 361-366, 1993
A;Title: A novel polymorphism of human serum amyloid A protein, SAAlgamma, A;Reference number: S33864; MUID:93290347; PMID:8512321
A;Contents: allele SAAl-gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: protein A; Residues: 19-69, 'A', 71 A; Accession: S21260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Title: Massive vascular An-amylutuu.
A;Reference number: A60431; MUID:90069.
A;Contents: allele SAA1*1 (SAA1-alpha)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: A56867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: S33864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Title: Human serum amyloid A protein.
A; Reference number: S21260; MUID:9218960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: protein A; Residues: 19-98, 'XXXX'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: S21261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Contents: allele SAA1*2a (SAA1-beta)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Accession: A60431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Massive vascular AA-amyloidosis: a histologically and biochemically distinctive number: A60431; MUID:90069444; PMID:2587936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J. 282,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C.M.; de Beer, M.C.;
                       19-29 <cor
                                                                                                        в30323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A91215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A94234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        615-620, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'A',71-74,'V',76-89,'D',91-122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,103-105,'X',107 <WES>
                                                                                                                            MUID:89155805; PMID:2646319
Sharp,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Otein. Complete amino acid sequence of a new variant. 92189607; PMID:1546977
   P.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Loose,
      Whitehead,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               subsets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <YOY>
                                                                                                                                                                                         new prealbumin (transthyretin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        macroglobulinemia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Beer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            coexisting in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   щ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of unusual siz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        is character
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               þŝ
```

```
R:Steinkasserer, A.; Weiss, E.H.; Schwaeble, W.; Linke, F. Biochem. J. 268, 187-193, 1990
A;Title: Heterogeneity of human serum amyloid A protein: A;Reference number: S09972; MUID:90262544; PMID:1971508
A;Accession: S09975
                                                                                                                                                                                                                                                                                                 A; Nolecule type: DNA
A; Molecule type: DNA
A; Residues: 32-122 <BET>
A; Residues: 32-122 <BET>
A; Cross-references: EMBL: X56653; NID: g36309; PIDN: CAA39975.1; PID: g36310
A; Cross-references: EMBL: X56653; NID: g36309; PIDN: CAA39975.1; PID: g36310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A:Cross-references: GB:M26152; NID:g1160968; PIDN:AAA85338.1; R;Betts, J.C.; Edbrooke, M.R.; Thakker, R.V.; Woo, P. Scand. J. Immunol. 34, 471-482, 1991
A;Title: The human acute-phase serum amyloid A gene family: st A;Reference number: S20103; MUID:92022342; PMID:1656519
A;Contents: alleler SAA2*1 (SAA2-alpha)
A;Accession: S20104
A; Molecule type: mRNA
A; Residues: 4-122 <ST2>
                                                                                                         A;Cross-references: EMBL:X51444; NID:g36316; A;Experimental source: clone pAS6
                                                                                                                                                                   A; Molecule type: mRNA
A; Residues: 1-55 <STE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Date: 24-Apr-1984 #sequence_revision 08-Feb-1996 #text_change 08-Dec-2000 C;Accession: A27902; S20104; S09975; S09976; S09973; B38974; A28445; A92763; R;Kluve-Beckerman, B.; Long, C.; Benson, M.D. Biochem. Genet. 24, 795-803, 1986 A;Title: DNA sequence evidence for polymorphic forms of human serum amyloid & R;Reference number: A27902; MUID: 87099785; PMID: 3800865
                                                                               A; Note: allele SAA2*1 (SAA2-alpha)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-122 <KLU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Species: Homo sapiens (man)
C; Date: 24-Apr-1984 #sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genomics A; Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Contents: allele SAA2*1 (SAA2-alpha)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              serum amyloid A2 protein precursor [validated] N.Alternate names: amyloid IV; amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Keywords: acute phase; amyloid; HDL; polymorphism F;1-18/Domain: signal sequence #status predicted <SIG>F;19-122/Product: (or 20-122) serum amyloid Al protein F;19-94/Product: (or 20-94) amyloid protein AA #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GDB:120364;
A;Map position: 11p15.1-11p15.1
A;Introns: 31/1; 77/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Kluve-Beckerman, B; Dwulet, F.E.; Benson, M.D. J. Clin. Invest. 82, 1670-1675, 1988
J. Clin. Invest. 82, 1670-1675, 1988
A;Title: Human serum amyloid A. Three hepatic mRNAs and A;Reference number: 139454; MUID:89034862; PMID:3183061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
A; Residues: 1-122 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Title: Evolution of the serum amyloid A (SAA) protein superfamily A; Reference number: A38975; MUID:94245191; PMID:8188253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Gene: GDB: SAAl;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: I39454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Contents: annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:M23698; NID:g758678; PIDN:AAA64799.1; PID:g758679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Toca<sub>T</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NYDA
                                                          S09976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A27902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OMIM: 104750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23; DB 1;
Pred. No. 1.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein AA (FMF);
                                                                                                                                      PIDN:CAA35809.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #status experimental
experimental <AP3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                   five
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amyloid-related serum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                structure, evolution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        corresponding proteins
                                                                                                                                                                                                                                                                             different variants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PID:g1160969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                serum amyloid A (SAA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <APA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

EMBL: X51445;

NID: 936320;

PIDN:CAA35810.1;

PID:g36321

```
A:Experimental source: amyloid fibrils, thyroid gland of rhematoid A:Note: sequence extracted from NCBI backbone (NCBIP:121046) R;Kluve-Beckerman, B.; Dwulet, F.E.; Benson, M.D. J. Clin. Invest. 82, 1670-1675, 1988
A:Title: Human serum amyloid A. Three hepatic mRNAs and the corresp A:Reference number: 139454; MUID:89034862; PMID:3183061
A:Accession: 139455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Note: this amyloid IV was isolated from a patient with rheumatoid arthritis R;Benditt, E.P.; Eriksen, N.; Hermodson, M.A.; Ericsson, L.H. FEBS Lett. 19, 169-173, 1971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-14,'G',16-88,'R',90-122 <WOO>
A; Cross-references: GB:J03474; NID:g337742;
R; Levin, M.; Franklin, E.C.; Frangione, B.;
J. Clin. Invest. 51, 2773-2776, 1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: GB:L05921
R;Woo, P.; Sipe, J.; Dinarello, C.A.; Colten, H.R.
J. Biol. Chem. 262, 15790-15795, 1987
J. Title: Structure of a human serum amyloid A gene and modulation of its expression A;Reference number: A28445; WIDI:88058926; PMID:2890635
A;Contents: allele SAA2*2 (SAA2-beta)
A;Accession: A28445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A:Molecule type: mRNA
A:Residues: 73-88, "R',90-122 <ST3>
A:Residues: 73-88, "R',90-122 <ST3>
A:Residues: 73-88, "R',90-122 <ST3>
A:Cross-references: EMBL:X51440; NID:g36312; PIDN:CAA35805.1; PID:g825715
A:Experimental source: clone pAS2
A:Note: allele SAA2*2 (SAA2-beta)
R:Steel, D.M.; Sellar, G.C.; Uhlar, C.M.; Simon, S.; DeBeer, F.C.; Whitehead, A.S.
Genomics 16, 447-454, 1993
Genomics 16, 447-454, 1993
A:Title: A constitutively expressed serum amyloid A protein gene (SAA4) is closely linke
A:Reference number: A38974; MUID:93300520; PMID:7686132
A:Constants: allele SAA2*2 (SAA2-beta)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Note: this protein is from a patient with generalized amyloidosis assoc: R; Baba, S.; Takahashi, T.; Kasama, T.; Shirasawa, H. Biochim. Biophys. Acta 1180, 195-200, 1992
A; Title: Identification of two novel amyloid A protein subsets coexisting A; Reference number: A56867; NUID:93099171; PMID:1463770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Note: this protein is from a patient with familial Mediterranean fever A;Note: the sequence of residues 19-72 of amyloid protein AA from a patient R;Ein, D.; Kimura, S.; Terry, W.D.; Magnotta, J.; Glenner, G.G. J. Biol. Chem. 247, 5653-5655, 1972
A;Title: Amino acid sequence of an amyloid fibril protein of unknown origin. A;Reference number: A92112; MUID:72266694; PMID:5055786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Title: The amino acid sequence of a major nonimmunoglobulin component of A; Reference number: A92763; MUID:72268653; PMID:5056669 A; Contents: allele SAA2*2 (SAA2-beta)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Experimental A; Note: allele
                                       A; Molecule type: mRNA
A; Residues: 1-122 < RES>
                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: protein A; Residues: 65-80 < BAB>
                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Contents: allele SAA2*1
A;Accession: B56867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: protein A; Residues: 19-42 <BEN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Reference number: A91345
A; Accession: A91345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Title: The major proteins of human and monkey amyloid substance:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: protei
A; Residues: 19-63 <EIN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: protein A; Residues: 19-70, 'R', 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-88, 'R', 90-122 <ST4>
                                                                                                   A; Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: A92763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: B3897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: S09973
   Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the amino-terminal tripeptide is sometimes missing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
   GB:M23699; NID:g758680; PIDN:AAA64800.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 72-88, 'R', 90-94 <LEV>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (SAA2-alpha)
                                                                                                   from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIDN:AAB59539.1;
Pras, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          amyloidosis associated with
                                                                                                                                                                                                      corresponding proteins
PID:g758681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PID: 9337743
                                                                                                                                                                                                                                                                                                                                             arthritis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 common properties
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              patient with tuberc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ĺn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    some amyloid
                                                                                                                                                                                                                                                                                                                                             patient
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   individ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tube
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in
```

```
J. Clin. Invest. 87, 1177-1185, 1991
A;Title: Serum amyloid A (SAA3) produced by rabb A;Reference number: S32574; MUID:91185595; PMID: A;Status: -----
                                                                                                                                                                                                        serum amyloid AA-3 - golden hamster (;Species: Mesocricetus auratus (golden hamster) C;Date: 22-Nov-1989 #sequence_revision 22-Nov-1989 C;Accession: A30248 R;Webb, C.F.; Tucker, P.W.; Dowton, S.B. Biochemistry 28, 4785-4790, 1989 A;Title: Expression and sequence analyses of serum A;Reference number: A30248; MUID:89352552; PMID:276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Gene: GDB:SAA2
A;Cross-references: GDB:132592; OMIM:104751
A;Map position: 11p15.1-11p15.1
A;Introns: 31/1; 77/2
C;Superfamily: amyloid protein
C;Keywords: acute phase; amyloid; polymorphism
C;Keywords: signal sequence #status predicted
F;1-18/Domain: signal sequence Association #status
                                                                                                                          A; Molecule type: DNA
A; Residues: 1-122 <WEB>
C; Superfamily: amyloid
                                                                                                                                                                                                                                                                                                                                            RESULT
A30248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  serum amyloid protein SAA - rabbit
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995
C;Accession: S32574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: EMBL:M64696; NID:g165698; PIDN:AAA31464.1; PID:g165699 C;Superfamily: amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
밁
                            Š
                                                                                                                                                                           A; Accession: A30248
A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-122 <MIT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local (
                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
 59
                                                                                                                                                                                                                                                                                                                                                                                                           59 NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59 NYDA 62
                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                            protein
                                                                                                                                                                                                             sequence analyses of serum amyloid 248; MUID:89352552; PMID:2765510
                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 23; Pred. No.
                                                                             Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. 1.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       y rabbit synovial fibroblasts treated with PMID:1849144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2;
1.8e+02;
0;
                                                                               1.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 experimental <MAT>
                                                                                                                                                                                                                                                                                          #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 122;
                                                                                              Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                             Þ
                                                                                                                                                                                                                            ij
                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                            30-Sep-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                               0,
                                                                                                                                                                                                                            Syrian hamster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                               0,
```

serum amyloid AA1 - gold C;Species: Mesocricetus

golden hamster

auratus

(golden hamster)

B30248

RESULT

Þ

```
A; Molecule type: mRNA
A; Residues: 1-122 <GER>
A; Cross-references: GB: M33431; NID: g191440; C; Superfamily: amyloid protein
                                                                                                                                                                        A;Reference number: A35660; MUID:90318412; PMID:2164641 A;Accession: A35660
 В
                           δÃ
                                                                                                                                                                                                                      R;Gervais, C.; Suh, M. Mol. Cell. Biol. 10, 4
                                                                                                                                                                                                                                               serum amyloid-related protein SAA3 - hamster C;Species: Cricetinae gen. sp. (hamster) C;Date: 28-Sep-1990 #sequence_revision 28-Se;C;Accession: A35660
                                                                                                                                                                                                                                                                                                                                                             Вр
                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Expression and sequence analyses of serum amyloid A;Reference number: A30248; MUID:89352552; PMID:2765510 A;Accession: C30248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
C30248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Residues: . . C; Superfamily:
                                                                                                                                                                A; Status: preliminary
                                                                                                                                                                                                      Mol. Cell. Biol. 10, 4412-4414, 1990
A;Title: Serum amyloid A protein-rela
                                                                                                                                                                                                                                                                                                       A35660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-122 <WEB>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R; Webb, C.F.; Tucker, P.W.; Dowton, S.B. Biochemistry 28, 4785-4790, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Accession: C30248
R; Webb, C.F.; Tucker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: Mesocricetus auratus (golden hamster)
C;Date: 22-Nov-1989 #sequence_revision 22-Nov-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-122 <WEB>
C; Superfamily: amyloid |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Title: Expression and sequence analyses of serum amyloid A;Reference number: A30248; MUID:89352552; PMID:2765510 A;Accession: B30248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R; Webb, C.F.; Tucker, P.W.; Dowton, S.B. Biochemistry 28, 4785-4790, 1989
                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     serum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Status: preliminary
                                                        Matches
                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Accession: B30248
                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amyloid AA2 -
                                                                                                                                                                                                                                                                                                                    34
 59
                                                                                                                                                                                                                                                                                                                                                             59 NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59
                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity les 4; Conserv
                                                                    Local
                           _
                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-Nov-1989 #sequence_revision 22-Nov-1989 #text_change 30-Sep-1993
                         NYDA 4
 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NYDA 62
                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amyloid protein
                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   golden hamster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein
                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                  Score 23; I
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 23;
                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                       28-Sep-1990 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23;
No.
                                                                                                                     PIDN:AAA37098.1; PID:g305362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 1.8e+02;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                            1.8e+02;
                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                  .8e+02;
s 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #text_change
                                                                            Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                      in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Þ
                                                                                                                                                                                                    herpes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in
                                                                                                                                                                                                                                                           20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the Syrian hamster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-Feb-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                    simplex virus
                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Syrian hamster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                   type
                                                                                          DЬ
                                                                                                                  QУ
                                                                                                                                                                                                 F;1-19/Domain: siç
F;20-122/Product:
                                                                                                                                                                                                                                                                      C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Tatum,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Title:
                                                                                                                                                                        Query Match
                                                                                                                                               Matches
                                                                                          59
                                                                                                                                                            Local
                                                                                                                    1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F.M.
                                                                                          NYDA
                                                                                          62
```

RESULT 35

```
B23843

B23843

Serum amyloid protein SAA2 precursor - mouse
N;Contains: amyloid protein SAA2
C;Species: Mus musculus (house mouse)
C;Date: 02-Jun-1988 #sequence_revision 02-Jun-1988 #text_change 20-/
C;Accession: B23843; B22675; A60864; A12268; S21287; S22427; I55984
C;Accession: A · Potter. D.A.; Stearman, R.S.; Morrow, J.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Superfamily: amyloid protein
C;Keywords: amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: mRNA
A;Residues: 1-39,'S',41-95,'A',97-122 <TATZ>
A;Cross-references: EMBL:X16428; NID:g1451; PIDN:CAA34451.1; PID:g1452
A;Cross-references: EMBL:X16428; NID:g1451; PIDN:CAA34451.1; PID:g1452
A;Ctions-reference in M.D.; Kluve-Beckerman, B.; Kushner, I.
J. Lab. Clin. Med. 118, 570-575, 1991
A;Title: The primary structure of serum amyloid A protein in the rabbit: comparison
A;Reference number: A54319; MUID:92078744; PMID:1744506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                serum amyloid A protein precursor - rabbit (C.) Species: Oryctolagus cuniculus (domestic rabbit) (C.) Species: Oryctolagus cuniculus (domestic rabbit) (C.) Date: 30 - Jun - 1992 #sequence_revision 30 - Jun - 1992 #text_change (C.) Accession: JS0608; JN0076; S13704; S13705; S14435; A54319 R.; Ray, A. R.; Ray, A. Biochem. Biophys. Res. Commun. 180, 1258-1264, 1991 A; Title: Rabbit serum amyloid A gene: cioning, characterization A; Reference number: JS0608; MUID: 92062152; PMID: 1953777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Experimental source: acute-phase serum
A:Note: sequence extracted from NCBI backbone (NCBIP:68876)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: protein
A; Residues: 'E', 20-81, 'A', 83-122 <LIE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            submitted to the EMBL Data A; Reference number: $14435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: mRNA
A;Residues: 1-39,'S',41-96,'G',98-122 <\hat{TATI>}
A;Cross-references: EMBL:X16428
A;Note: the authors translated the codon GGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: mRNA
A;Residues: 1-122 <RAD;
R;Tattum, F; Alam, J; Smith, A.; Morgan, W.T.
Nucleic Acids Res. 18, 7447, 1990
N;Title: Molecular cloning, nucleotide sequence heterozygosity and regulation of rabb
A;Reference number: S13704; MUID:91081342; PMID:2259638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Introns: 30/2; 77/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Accession: A54319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 54-122 <TAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Residues: 1-122 < RAY>
R; Ray, B.K.; Ray, A.
Biochem. Biophys. Res. Commun. 178, 68-72, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Reference number: A; Accession: S14435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: EMBL:X16427; NID:g1449; PIDN:CAA34450.1; PID:g1450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Reference number: A; Accession: JN0076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Reference number: A; Accession: JS0608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Complementary DNA cloning and nucleotide sequence of rabbit serum amyloid nce number: JN0076; MUID:91298985; PMID:1712590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              signal sequence #status
                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         serum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amyloid A protein #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Library, September 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       codon GGC
                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 predicted <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ВB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ala
                                                                              20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          analysis
```

```
Biochem. J. 283, b/3-0/0, 13-7.
A;Title: Mouse serum amyloid A protein. Com
A;Reference number: S21287; MUID:92272662;
A;Accession: S21287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Experimental source: strain CBA/J R;Experimental source: strain CBA/J R;Exiksen, N.; Exicsson, L.H.; Pearsall, N.; Lagunoff, D.; Benditt, E.P. Proc. Natl. Acad. Sci. Ur.S.A. 73, 964-967, 1976 A;Title: Mouse amyloid protein AA: homology with nonimmunoglobulin protein A;Reference number: A12268; MUID:76152375; PMID:815910 A;Accession: A12268
  밁
                                       Ş
                                                                                                                                                                                                    F;1-19/Domain: signal sequence #status predicted <SIG>F;20-122/Product: serum amyloid protein SAA2 #status p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: Primary structure of amyloid fibril protein AA A;Reference number: A60864; MUID:87282056; PMID:3611954 A;Accession: A60864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Title: Complete primary structures of two major murine serum amyloid A proteins deduce A;Reference number: A94041; MUID:85190607; PMID:3857624 A;Accession: B22675
                                                                                                                                                                                                                                                                                                  A; Map position: 7
A; Introns: 31/1;
                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: DNA
A;Residues: 32-122 <RES>
A;Cross-references: GB:M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Title: Structural diversity of murine serum amyloid A A; Reference number: I55984; MUID:87309776; PMID:3624868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: protein
A; Residues: 20-119,'D',121-122 <BE2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Title: Structure of the murine serum amyloid A gene family. A; Reference number: A23843; MUID:86250747; PMID:3013853
                                                                                                                                                                                                                                                                                                                                                   A;Gene: SAA2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: protein A; Residues: 20-92 < DWU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:M11130; NID:g200908; PIDN:AAA40085.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Yamamoto, K.I.; Migita, S. Proc. Natl. Acad. Sci. U.S.A. 82, 2915-2919,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Status:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Accession: S22427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Dwulet,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Residues: 1-122 <LOW>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: I55984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7; Yamamoto, K.
7. Immunol. 139, 1683-1688, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \;Residues: 20-122
                                                                                                                                                                                                                                                   Superfamily: amyloid protein Keywords: amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   de Beer, M.C.; de Beer, F.C.; Beach, C.M.; Carreras, I.; lochem. J. 283, 673-678, 1992
                                                                                                                                                                                   20-92/Product:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cross-references: GB:M13522; NID:g200910; PIDN:AAA40086.1;
                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Molecule type: protein Residues: 20-47 <ERI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dwulet, F.E.; Benson, M.D.
Lab. Clin. Med. 110, 322-329, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Accession:
59
                                                                                                                 Local Similarity
                                              1 NYDA 4
NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1-122 <YAM>
                                                                                                                                                                                                                                                                                                    77/2
                                                                                                                                                                                   amyloid A protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <BEE>
                                                                                                                                                                                                                                                                                                                                                                                             GB:M17791; NID:g200913; PIDN:AAA40087.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8442-8452, 1986
                                                                                                              100.0%;
                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       from
                                                                                                              Score 23;
Pred. No.
                                                                                                                                                                                   SAA2 #status experimental <MAT2>
                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Complete amino acid sequence and mRNA analysis 62; PMID:1590757
                                                                                                                                                                                                    SAA2 #status predicted <MAT1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1985
                                                                                                              1.8e+02;
                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         genes: Evolutionary implication:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 azocasein-induced amyloidosi:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sipe, J.D
                                                                                                                                                                                                                                                                                                                                                                                               PID:g200915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PID:g200909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PID: g200911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gene conversion.
                                                                                        0;
                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of human
                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
```

RESULT A23521

37

ded

```
serum amyloid protein SAA1 precursor - mouse C;Species: Mus musculus (house mouse) C;Date: 02-Jun-1988 #sequence_revision 02-Jur C;Accession: A23843; A23675 R;Lowell, C.A.; Potter, D.A.; Stearman, R.S.;
                                                                                                                                                                                                                                                                                                                       R;Yamamoto, K.I.; Migita, S.
Proc. Natl. Acad. Sci. U.S.A. 82, 2915-2919, 1985
A;Title: Complete primary structures of two major murine serum A;Reference number: A94041; MUID:88190607; PMID:3857624
A;Accession: A22675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Residues: Î-122 <LOW>
R; Stearman, R.S.; Lowell, C.A.; Pearson, W.R.; Morrow, J.F.
Ann. N. Y. Acad. Sci. 389, 106-115, 1982
A; Title: Regulation of synthesis of amyloid A-related protein A; Reference number: 149495; MUID:82229376; PMID:6953913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA

#; Residues: 27-122 <ST2>

#; Residues: 27-122 <ST2>

#; Cross references: GB:X03479; NID:g54035; PIDN:CAA27199.1; PID:g817998

R; Lowell, C.A.; Potter, D.A.; Stearman, R.S.; Morrow, J.F.

J. Biol. Chem. 261, 8442-8452, 1986

A; Title: Structure of the murine serum amyloid A gene family. Gene convertible as the convergence of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Introns: 31/1; 77/2
C;Superfamily: amyloid protein
C;Keywords: acute phase; amyloid
F;19-122/Product: serum amyloid-related protein SAA3 #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Stearman, R.S.; Lowell, C.A.; Peltzman, C.G.; Morrow, J.F. Nucleic Acids Res. 14, 797-809, 1986
A;Title: The sequence and structure of a new serum amyloid A A;Reference number: A23521; MUID:86120372; PMID:3003697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     serum amyloid A3 precursor - mouse C;Species: Mus musculus (house mouse) C;Decies: Mus musculus (house mouse) C;Date: 02-Jun-1988 #sequence_revision 02-Jun-1988 #text_change 20-Aug-1999 C;Accession: A23521; B23521; C23843; I49495
A; Map position:
A; Introns: 31/1;
                                                                                                                                          C; Genetics:
                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 9-122 < YAM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: DNA
A;Residues: 1-122 <LOW>
A;Cross-references: GB:M13521; NID:g200905; PIDN:AAA40084.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J. Biol. Chem. 261, 8442-8452, 1986
A;Title: Structure of the murine serum amyloid A gene family.
A;Reference number: A23843; MUID:86250747; PMID:3013853
A;Accession: A23843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: GB:M25467; NID:g191929; C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 27-64 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: C23843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-30 <ST1>
A; Accession: B23521
                                                                                             A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Status: translated from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Accession: I49495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Accession: A23521
                                                                                                                                                                                           A;Cross-references: GB:M11131; NID:g200903; PIDN:AAA40083.1; PID:g200904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59 NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Potter, D.A.; Stearman, R.S.; Morrow, J.F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-Jun-1988 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
1.8e+02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIDN:AAA37231.1; PID:g191930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PID: 9200906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gene conversion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gene conversion
                                                                                                                                                                                                                                                                                                                                                                                                                          amyloid A proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
A; Cross-references: GDB:132592;
A; Map position: llp15.1-11p15.1
C; Superfamily: amwinced
                                     RESULT
146981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;ue Beer, M.C.; de Beer, F.C.; McCubbin, W.D.; Kay, C.M.; Kindy, M.S. J. Biol. Chem. 268, 20606-20612, 1993
A, Fitle: Structural prerequisites for serum amyloid A fibril formation A; Reference number: A48020; MUID:93388642; PMID:8376413
A, Accession: 149496
 serum amyloid protein A
C;Species: Oryctolagus c
                                                                                                          밁
                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                      A;Molecule type: mRNA
A;Residues: 1-122 <RES>
A;Cross-references: GB:M23700; NID:g758682; PIDN:AAA64801.1; PID:g758683
                                                                                                                                                                                                                                                                                                                                                                                                             R;Kluve-Beckerman, B.; Dwulet, F.E.; Benson, M.D. J. Clin. Invest. 82, 1670-1675, 1988
A;Title: Human serum amyloid A. Three hepatic mRNAs and A;Reference number: I39454; MUID:89034862; PMID:3183061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    serum amyloid A2-beta - human
C;Species: Homo sapiens (man)
C;Date: 06-Sep-1996 #sequence_revision 06-Sep-1996 #text_change
C;Accession: I39456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                 A;Gene: GDB:SAA2
                                                                                                                                                                                                                                                                                                                                                                             A:Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-122 <RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amyloid A - mouse
C; Species: Mus musculus (house mouse)
C; Date: 02-Jul-1996 #sequence_revisio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; Keywords: amyloid
F; 1-19/Domain: signal se
F; 20-122/Product: serum
                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: I39456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     I49496
                                                                                                                                                                            Matches
                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40
                                                                                                          59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59 NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59 NYDA 62
                                                                                                                                        1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                        NYDA 62
                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         signal sequence
                                                                                                                                                                        100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GB:L22190; NID:g404752; PIDN:AAA19818.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #sequence_revision 02-Jul-1996 #text_change 20-Aug-1999
A - rabbit cuniculus
                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   amyloid protein SAA1 #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 23; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #status predicted <SIG>
                                                                                                                                                                                                                                                                             OMIM: 104751
                                                                                                                                                                          0;
(domestic rabbit)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                        Score 23; I
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 23;
Pred. No.
                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                          .8e+02;
                                                                                                                                                                                                        Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                                                                                                                                                                                                                                                                                                                                                                                               corresponding proteins in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PID: 9404753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-Aug-1999
                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
A;Title: A constitutively expressed serum A;Reference number: A38974; MUID:93300520; A;Contents: annotation
                                                                                                                                               A;Cross-references: EMBL:X13895; NID:g36305; PIDN:CAA32096.1; R;Steel, D.M.; Sellar, G.C.; Uhlar, C.M.; Simon, S.; DeBeer, F. Genomics 16, 447-454, 1993
                                                                                                                                                                                                                                                                                                   R;Sack Jr., G.H.; Talbot Jr., C.C. |
Gene 84, 509-515, 1989
A;Title: The human serum amyloid A (SAA) encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Rygg, M.; Marhaug, G.; Husby, G.; Dowton, S.B. Scand. J. Immunol. 34, 727-734, 1991
A;Title: Rabbit serum amyloid protein A: expression and A;Reference number: 146981; MUID:92086827; PMID:1721234
A;Cross-references: GDB:132593
A;Map position: 11p15.1-p14
                                     A; Gene: GDB: SAA3;
                                                       C; Genetics:
                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-122 <SAC>
                                                                                                                                                                                                                                                                                                                                                                  C; Accession: JN0029
                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Homo sapiens (man)
C;Date: 20-Feb-1995 #sequence_revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          serum amyloid protein A - rabbit
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 04-Sep-1997 #sequence_revision 04-Sep-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 1-122 <RYG>
A; Cross references: GB:S71722;
C; Superfamily: amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Date: 04-Sep-1997 #sequence_revision 04-Sep-1997 #text C;Accession: I46981
R;Rygg, M.; Marhaug, G.; Husby, G.; Dowton, S.B.
Scand. J. Immunol. 34, 727-734, 1991
A;Title: Rabbit serum amyloid protein A: expression and A;Reference number: I46981; MUID:92086827; PMID:1721234
A;Accession: I46981
                                                                        A; Note: references cited confirm a
                                                                                                                                                                                                                                          A; Status: conceptual translation of pseudogene
                                                                                                                                                                                                                                                                   A; Reference number: JN0029 A; Accession: JN0029
                                                                                                                                                                                                                                                                                                                                                                                                                       serum amyloid A3 pseudogene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: mRNA
A; Residues: 1-122 < RYG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Reference number: A; Accession: I46982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       I46982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Status: preliminary; translated from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59 NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59 NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              I46982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                   GSAA1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GB:S71725; NID:g240623; PIDN:AAB20617.1; PID:g240624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NID: g240621; PIDN: AAB20616.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 23;
Pred, No.
                                                                        frameshift error between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-Sep-1997 #text_change 20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                               1<mark>7-May-1996 #text_change 20-Apr-2000</mark>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.
                                                                                                              amyloid A protein ; PMID:7686132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . 1.8e+02;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #text_change 20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 122
                                                                                                                                                                                                                                                                                                         GSAA1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   primary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             primary
                                                                        codons
                                                                                                                             gene (SAA4) is closely
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PID:g240622
                                                                                                                                                                                        PID:g36306
                                                                                                                                                                                                                                                                                                     nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     structure deduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             structure deduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                        30
                                                                                                                                                                     Whitehead,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                        and
                                                                        32
                                                                        that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     fro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fro
                                                                                                                                 11
```

```
R.Marhaug, G.; Husby, G.; Dowton, S.B.
J. Biol. Chem. 265, 10049-10054, 1990
A;Title: Mink serum amyloid A protein. Expression and primary structure based on cDNA A;Reference number: A36451; MUID:90277614; PMID:2351648
A;Accession: A36451
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-129 <MAR>
A;Residues: 1-129 <MAR>
A;Cross-references: GB:M34953; GB:J05445; NID:g164265; PIDN:AAA30968.1; PID:g164266
C;Superfamily: amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 45
A36451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: protein
A;Residues: 1-128 <AMB>
A;Residues: 1-128 <AMB>
A;Experimental source: strain TJ12
A;Experimental source: o'
C;Superfamily: cytochrome c'
C;Keywords: chromoprotein; electron transfer; heme; iron; metalloprotein
F;117,120/Binding site: heme (Cys) (covalent) #status predicted
F;121/Binding site: heme iron (His) (axial ligand) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Ambler, R.P.; Bartsch, R.G.; Daniel, M.; Kamen, M.D.; McLellan, L.; Meyer, T.E.; Van Proc. Natl. Acad. Sci. U.S.A. 78, 6894-6857, 1981
A;Title: Amino acid sequences of horizontal cytochromes c' and c-556.
A;Reference number: A93899; MUID:82082545; PMID:6273892
A;Accession: A00139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               serum amyloid Al precursor - American mink
C;Species: Mustela vison (American mink)
C;Date: 08-Mar-1991 #sequence_revision 08-Mar-1991 #text_change 20-Aug-1999
C;Accession: A36451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cytochrome c'. Rhodopseudomonas sp. C;Species: Rhodopseudomonas sp. C;Species: Rhodopseudomonas sp. C;Date: 18-Dec-1981 #sequence_revision 18-Dec-1981 #text_change 03-Mar-2000 C;Accession: A00139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
Search completed: February Job time: 12.5 secs
                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Introns: 31/1; 77/2 C;Keywords: pseudogene
                                                                                         용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 4
                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 4; Conservative 0
                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NYDA 4
||||
59 NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 100.
nes 4; Conservative
                                                                                         58 NYDA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29 NYDA 32
                                                                                                                                      1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NYDA 4
                                                                                                                                                                                  4;
                                                                                                                                                                              100.0%; Score 23; DB 2; ilarity 100.0%; Pred. No. 1.9e+02; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 23; DB 1; 1
100.0%; Pred. No. 1.9e+02;
tive 0; Mismatches 0;
                     6,
                     2003, 11:23:10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 23; DB 4;
Pred. No. 1.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                        Length 129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 122;
                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                             S
```

**					
		٥			
			, 1		
				-	
\					
	÷				

Δ,

```
Result
                                                                                                                                                                                                                                                                                     Database
                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                         Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                   Run on:
                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                               protein -
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                            Score
 protein search, using
                                                                                                                                                                                                                                                                                                                          length:
                                                                                                                                                                                                                                                                                                                                                                                                  PAT943-5
23
                                                                                                                                                                                                                           Query
Match
112892 seqs, 41476328 residues
                                                                                                                                                                                                                                                                                                                                                                       BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                  February 6, 2003, 11:16:00;
                                                                                                                                                                                                                                                                                     SwissProt_40:*
                                                                                                                                                                                                                                                                                                                                                                                           nyda 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version
Copyright (c) 1993 - 2003
                          0000000000000
                                                                                                                     00000
                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                          20000000000
ВB
                                                                                                                                                                                                                                                                                                                                                                       Gapext 0.5
SAA3_HUMAN
SAA3_MESAU
SAA3_MOUSE
SAA3_RABIT
SAA_HUMAN
SAA_ANAPL
SAA_MACEU
CYCP_RHOSP
SAA1_MUSVI
SAA2_MUSVI
SAA_CANFA
SAA4_HUMAN
COAC_MOUSE
RIB1_PHOLE
RISB1_PHOLE
                                                                                                                    SAA_SHEEP
Y531_BUCAI
SAAL_MESAU
SAA1_MOUSE
SAA1_RABIT
SAA2_MESAU
SAA2_RABIT
                                                                                                                                                                      PTSO_KLEPN
SAA_FELCA
RL23_MYCCA
SAA5_MESAU
SAA_HORSE
SAA_BOVIN
                                                                                                                                                                                                              SAA_MACMU
                                                                                                                                                                                                                                                                                                                                                                                                                                               sw model
                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                    ); Search time 5.33333 Seconds (without alignments)
31.107 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  n 5.1.3
Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ltd.
P00146
P18575
P02739
P19708
P19542
Q14019
Q9cq16
Q01994
Q931n8
P13719
Q9p611
                                                                       P02735
P02740
P53613
                                                                                          P04918
P35543
                                                                                                       P22614
P19453
                                                                                                                                                                                          P02738
P51185
P19707
P10140
                                                                                                                                                                                                                           Description
     photobacter
staphylococ
escherichia
                               3 macropus eu
6 rhodopseudo
5 mustela vis
9 mustela vis
8 canis famil
2 homo sapien
homo sapien
                                                                                                                         ) mycoplasma
) mesocricetu
/ equus cabal
) bos taurus
o ovis aries
/ buchnera ap
/ mesocricetu
/ mesocricetu
/ mesocricetu
/ mus musculu
/ mus musculu
                                                                                                       homo sapien mesocricetu
                                                                             homo sapien
anas platyr
                                                                                          mus musculu
oryctolagus
                                                                                                                                                                                                       macaca mula
klebsiella
                                                                                                                                                                                                 felis
                                                                                                                                                                                                 silve
```

RESULT PTSO_K ID P AC P DT 0: DT 1: DT 1:	D Qy M	SQ SQ SQ SQ SQ SQ SQ SQ SQ SQ SQ SQ SQ S	38888888	CCERRRRR				
JLT 2 _KLEPN PTSO_ P5118 01-00 01-00 16-00 Phospl	itches	Interp R Interp R Pfam; R ProDom R ProDom R SMART; R PROSIT R PROS	· · · · ·	SEQ MED Her Ben "Am Bio	21- 21- 30- Amy Mac Euk Euk Mam NCB	JLT 1 MACMU SAA_		33 34 44 30 30 30 44 40 40 40 40 40 40 40 40 40 40 40 40
244422	NYI NYI NYI		TISSUI INDUC INDUC DISEA EXTRA EXTRA THESE THEY I	MEDLINE-7223006 MEDLINE-7223006 MEDLINE-7223006 MEDLINE-7223006 MEDLINE-723006 ME	JUL-1 JUL-1 JUL-1 Loid loid aca m aryot malia copit	T 1 ACMU SAA_MACMU		
H- 0.0.	44); IP 00027 PR00 PR00 PD00 PD00 PS0 1ase; 7	TISUE SPECTION: I DISCASE: RE DISCASE: RE EXTRACELLUL THESE DEPOS THESE DISRUP SIMILARITY: A03198. VII	ENCE. INE=72230 odson M.A itt E.P.; no acid s; hemistry FUNCTION:	986 986 prot prot heci 1D=9	₫		223311
о о о	Conse	IPRO00096; JO277; SAA_p 20277; SAA_p R00306; SER 2002112; SER 20197; SAA; PS00992; SA SE; Plasma; 76 AA; 8	JE SPECIFICI DE SPECIFICI CTION: UPON ASE: REACTIV ACELLULAR AC E DEPOSITS A E DISRUPT TIS LARITY: BELO LARITY: BELO	0069; Pa A., Kuhi ; sequenco 11:293:	(Rel. (Rel. (Rel. ein A ta (F ta (F theri nae;	S		100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0
STANDARD; 1.34, Cr 1.34, La 1.40, La protein N	Conservative	PF00277; SAA_proteins; PF00277; SAA_proteins; PF00277; SAA_proteins; PF002712; SERUMAMYLOID NED002112; Serum_amylo: SM00197; SAA; 1. NE; PS00992; SAA; 1. Phase; Plasma; HDL; Amyloce; PS00992; SAA; Phase; Plasma; HDL; Amyloce; PS00992; SAA; Phase; Plasma; HDL; Amyloce; PS00992; SAA; NECE 76 AA; 8620 MW; 100.08; NECE 76 AA; 100.08;		SEQUENCE. SEQUENCE. SEQUENCE. MEDLINE-72230069; PubM Hermodson M.A., Kuhn R Hermodson M.A., Kuhn R Benditt E.P.; "Amino acid sequence o Biochemistry 11:2934-2: -!- FUNCTION: MAJOR ACI	21-JUL-1986 (Rel. 01, Created) 21-JUL-1986 (Rel. 01, Last sequence update) 30-MAY-2000 (Rel. 39, Last annoctation update Amyloid protein A (Amyloid fibril protein AA Macaca mulatta (Rhesus macaque). Eukaryota; Metazoa; Chordata; Craniata; Vert Mammalia; Eutheria; Primates; Catarrhini; Ce Cercopithecinae; Macaca.	STANDARD;		163 165 205 200 200 233 233 233 233 233 233
RD; Created) Last seg Last ann	ive	%; Serum_amyloid Lproteins; 1. SERUMAMYLOID. Serum_amyloid_a; Ax; 1. SAA; 1. S	Y: PL YTOKI , SEC JMULA E HIG E ST SS TO	PubMed=4625315 hn R.W., Walsh ce of monkey a 34-2938(1972). R ACUTE PHASE	Crea Last Last Yloid s mac horda rimat	RD;		33 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
	0,	um_amyloid .ns; 1. rLOID. myloid_A; myloid_A; Amyloid. fW; A2E39 0%; Scor 0%; Pred	PLASMA, SY OKINE STIMU SECONDARY A ULATION IN HIGHLY INSO STRUCTURE TO THE SAA	62531 Walsi nkey 1972)	ted) seque anno fib) aque ta; (es; (_		TP) PH; WRI YCI Y38 Y38 UB; HE)
PRT; ed) sequence annotation (Nitrogen	Mis	loid_A ld_A; 1 ld_A; 1 .oid. .2E3905; .2E3905; .2E3905;	TITY: PLASMA, SYNTHES: V CYTOKINE STIMULATIO) V(YE, SECONDARY AMYLOTIO) ACCUMULATION IN VARION ARE HIGHLY INSOLUBLE ISSUE STRUCTURE AND CO CONGS TO THE SAA FAMIO		lence otati ril p). Orani Catar	PRT;	ALIG	TPX_STRPA PHA2_SYNPY TPX_PASMU WRBA_ECO57 YCPZ_PSEA9 Y263_LISMO Y362_LISIN UBL3_HUMAN UBL3_MOUSE HEX8_ADE40 HEX8_ADE41 UBL4_MOUSE
286	Mismatches	Lamyloid_A. S; 1. OID. (yloid_A; 1. Amyloid. Amyloid. Amyloid. Amyloid. B; Score 23; DB 1 S; Pred. No. 36;	PLATION. WAYLOIDOSIS IS WARIOUS TISSUE JUBLE AND RESI AND COMPROMISE A FAMILY.	Z	ce update) tion update) protein AA) niata; Verte arrhini; Cer	76	ALIGNMENTS	PA NPY MU 057 EA9 SMO SIN MAN USE E40 E41
90 AA. pdate) update related	nes	SODED DB 36;		0 2	ate) odate ln AA Vert Vert	AA.	ល	
) HPr).	0;	, Cä	BY THE IS CH. SSUES (RESIST.) MISE FI	rath H., Eriks tein A."; APOLIPOPROTEIN	tte) date) n AA). Vertebrata; Eutel			
•	Indels	CRC64;	HARA	"; PROT	thec			
	els	h 76;	ED BY THE LIVER. SIS IS CHARACTERIZED TISSUES OF THE SAA! TO RESISTANT TO PROTIPROMISE FUNCTION.		Euteleos cidae;			P31307 P27646 P57880 Q8x4b4 P29300 P58495 Q92es6 P15374 Q9jkb1 P11821 P11821 P58321
	0;	•	ZED 1 AA PI ROTEC	OF THE	ostomi;			
	Gaps		(IZED BY THE SAA PROTEIN PROTEOLYSIS	E HDL	n1;			streptococ synechococ pasteurell escherichi pseudanaba listeria i listeria i listeria i homo sapie mus muscul human aden human aden
	ŭ		ν. ·					streptococc synechococc pasteurella escherichia pseudanabae listeria mo listeria in homo sapien mus musculu human adeno human adeno
	0;							200722007200

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SQUESTION OF THE PROPERTY OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P19707;
Ol-FEB-1991 (Rel. 17, Created)
Ol-FEB-1991 (Rel. 17, Last sequence update)
Ol-FEB-1991 (Rel. 17, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
Amyloid protein A (Amyloid fibril protein AA).
Felis silvestris catus (Cat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Felidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FELCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS00369; PTS_HPR_HIS; 1.
PROSITE; PS00589; PTS_HPR_SER; 1.
Phosphotransferase system; Phospht
MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Merrick M.J., Taylor M.;

Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.

-I- FUNCTION: SEEMS TO HAVE A ROLE IN LINKING CARBON AND NITROGEN ASSIMILATION. PROBABLY ACT IN A REGULATORY CAPACITY AND COULD CONTROL THE STATE OF PHOSPHORYLATION OF IIA-NTR (PTSN).

-I- SUBCELLULAR LOCATION: Cytoplasmic (Probable).
                                                                                                                                                                                                                                                                   human AA.
                                                                                                                                                                                                                                                                                                                                      Kluve-Beckerman B.,
                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=90091422;
                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                             "Primary structures
                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9685;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SAA_FELCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR001020; HPr_HisP_site.
InterPro; IPR002114; HPr_SerP_site.
InterPro; IPR000312; HPr_protein.
Pfam; PF00381; PTS-HPr; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; Z50803; CAA90685.1; -. HSSP; P08877; 2HPR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entities requires a license agreement (Some send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-M5al;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacteria; Proteobacteria;
Klebsiella.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Klebsiella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                                                                      COMPLEX.
TISSUE SPECIFICITY: PLASMA, SYNTHESIA
TISSUE SPECIFICITY: PLASMA, SYNTHESIA
DISEASE: REACTIVE, SECONDARY AMYLOIDOSIS IS CHARACTERIZED BY THE EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES OF THE SAA PROTEIN THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTEOLYSIS
                                                                                                                                                                                                       FUNCTION: MAJOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: BELONGS TO THE HPR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PTM: PROBABLY PHOSPHORYLATED BY A YET UNCHARACTERIZED ENZYME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SWISS-PROT entry is copyright. It is produced through a collable of the Swiss Institute of Bioinformatics and the EMBL outst European Bioinformatics Institute. There are no restrictions by non-profit institutions as long as its content is in
                                                                                                                                                                                                                                     Biochem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NPR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pneumoniae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                    Physiol. 94
MAJOR ACUTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                          PubMed=2598632;
                                                                                                                                                                                                                                                                                                 Dwulet F. of dog an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                     dog and
                                                                                                                                                                                                    94B:175-183(1989).
TE PHASE REACTANT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Phosphorylation.

PHOSPHORYLATION (E
PHOSPHORYLATION (E
PHOSPHORYLATION (E
PHOSPHORYLATION (E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 23; DE
Pred. No. 43;
D; Mismatches
                                                                                                                                                                                                                                                                                    cat amyloid
                                                                                                                                 SYNTHESIZED
                                                                                                                                                                                                                                                                                                                         Dibartola
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           subdivision; Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                             APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                              D S
                                                                                                                                 ВY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                           .P., Benson proteins:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (BY SIMILARITY).
(BY SIMILARITY).
6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                 THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Euteleostomi; Felis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    by
                                                                                                                                                                                                                                                                                    omparison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
   SAA PROTEIN.
PROTEOLYSIS;
                                                                                                                                                                                                 Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              yh a collaboration - EMBL outstation -
                                                                                                                                                                                                 THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          outstation
                                                                                                                                                                                                                                                                                           ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
```

```
RESULT 5
SAA5_MESAU
                                                                                                                                                                                                                                                                          A TO SERVICE OF THE S
                                                                                             밁
                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
RL23_MYCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                              Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAR-1989
01-MAR-1989
01-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not kemoved. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                        PROSITE; PS00050; Ribosomal protein;
                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001014; Ribosomal_L23 |
Pfam; PF00276; Ribosomal_L23; 1.
                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; X06414; CAA29706.1; -. PIR; S02833; R5YM23.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN-ATCC 27343 / KID;
STRAIN-ATCC 27343 / KID;
MEDLINE=88142549; PubMed=3481422;
Medline=88142549; PubMed=3481422;
Ohkubo S., Muto A., Kawauchi I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bacteria; Firmicute
Entomoplasmataceae.
                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ohkubo S., Muto A., Kawauchi Y., Yan
"The ribosomal protein gene cluster
Mol. Gen. Genet. 210:314-322(1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00277; SAA_proteins; 1.
PRINTS; PR00306; SERUMAMYLOID.
PRODOM; PD002112; Serum_amyloid_a; 1.
SMART; SM00197; SAA; 1.
PROSITE; PS00992; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RL23_MYCCA
P10140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THEY DISRUPT TISSUE STRUCTURE
-:- SIMILARITY: BELONGS TO THE SAP
PIR; JLO111; YLCTA.
InterPro; IPR000096; Serum_amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=2095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mycoplasma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Acute
                                                                                      57 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
||||
40 NYDA 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40
                                                                                                                                   1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: BELONGS TO THE L23P FAMILY OF RIBOSOMAL PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . Gen. Genet. 210:314-322(1987) FUNCTION: BINDS TO A SPECIFIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                phase; Plasma;
                                                                                                                                                                                                                                                                                                             F00276; Ribosomal_L23; 1. PD001141; Ribosomal_L23; 1. PS00050; RIBOSOMAL_L23; 1.
                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4;
                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               capricolum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e; Plasma; HDL; Am
90 AA; 10122 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Rel. 10, Created)
(Rel. 10, Last sequence up)
(Rel. 32, Last annotation)
al protein L23.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                          10857
                                                                                                                                                                                                                                               rena-binding.
10857 MW; 7D2507D2F1A7FC31 CRC64;
                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Serum_amyloidLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mollicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amyloid
                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THE SAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                  Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        112DBD4BAB49B775 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yamao F., Osawa S
ter of Mycoplasma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGION ON THE 23S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Entomoplasmatales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND COMPROMISE FUNCTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94
                                                                                                                                                                                                  DB
45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Osawa S.;
                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.
                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                     Length 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   capricolum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90;
                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

```
RESULT 6
SAA_HORSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALD DEPOSITE OF THE PROPERTY O
      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 4
                                                                                                          TISSUE-Blood;
MEDLINE-89332320; PubMed-2502829;
Sletten K., Husebekk A., Husby G.;
"The primary structure of equine serum"
The primary structure of equine serum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SAA_HORSE P19857;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00306; SERUMAMYLOID.
ProDom; PD002112; Serum_amyloid_A;
SMART; SM00197; SAA; 1.
PROSITE; PS00992; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P81491;
15-DEC-1998 (
15-DEC-1998 (
15-DEC-1998 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR000096; Serum_amyloid_A. Pfam; PF00277; SAA_proteins; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mesocricetus auratus (Golden hamster).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-DEC-1998 (Rel. 37, Crea
15-DEC-1998 (Rel. 37, Last
15-DEC-1998 (Rel. 37, Last
Serum amyloid A-5 protein.
                                                                                                                                                                                                                                                                                                                                                                                   01-FEB-1991 (Rel. 17, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Serum amyloid A protein (SAA) [Contains: Amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Acute phase; Plasma; SEQUENCE 102 AA; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   subtypes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       de
  MEDLINE=87291864; PubMed=3616485; Sletten K., Husebekk A., Husby G.; The amino acid sequence of an amy
                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9796;
                                                                                                                                                                                                                                                                                                                                             fibril protein AA)].
Equus caballus (Horse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sipe J.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-93294291;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Syrian and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10036;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mesocricetus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SAA5_MESAU
                                                                                        SEQUENCE OF
                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTECTIVES.

THEY DISRUPT TISSUE STRUCTURE AND COMPROMISE FUNCTION.

SIMILARITY: BELONGS TO THE SAA FAMILY.

n; PF000277: Car
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Beer M.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE SPECIFICITY: PLASMA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION: MAJOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               150:5361-5370(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Armenian hamsters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Identification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Beer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PubMed=8515064;
Beer F.C., Beach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; HDL;
11704
                                                                                                                                                                                                                                                                                                   Chordata; Craniata; Vertebrata; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACUTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Amyloid; Multigene family. MW; 8A67FD6852866675 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ters differ :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PHASE REACTANT. APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence
an amyloid fibril protein AA isolated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Beach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SYNTHESIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Syrian hamster serum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in serum amyloid A gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  110
                                                                                                                                                 amyloid A (SAA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gonnerman W.A., Carreras
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BY THE LIVER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 102;
                                                                                                                                                                                                                                                                                                                                                                                        protein A (Amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                          Euteleostomi,
                                                                                                                                                 protein.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ι.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

```
A RANGE REPORTED TO THE REPORT OF THE REPORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAA_BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIR; A38573; A28573.

InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_proteins; 1.
PRINTS; PR00306; SERUMAMYLOID.
ProDom; PD002112; Serum_amyloid_A; 1.
SMART; SM00197; SAA; 1.
PROSITE; PS00992; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
VARIANT
VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SAA_BOVIN P35541;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           from the h
                                                                                  "A unique
protein,";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-1994 (Rel. 29, Created)
01-JUN-1994 (Rel. 29, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Serum amyloid A protein (SAA) [Contains: Amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VARIANT
VARIANT
SEQUENCE OF 4-16. MEDLINE=88277778;
                                                                                                                                                                                                                                                Rossevatin K., Andresen P.K., Sletten K., Husebekk A., I
Nordstoga K., Johnson K.H., Westermark, Westermark
"The complete amino acid sequence of bovine serum amyloid
(SAA) and of subspecies of the tissue-deposited amyloid
                                                                                                                                                                                                                                                                                                                                  MEDLINE=92150985; PubMed=1738817;
                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                          Bovidae; Bovinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fibril
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Acute phase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <del>-</del>
                                                                                                                                          SEQUENCE OF 1-90.
MEDLINE=89080450;
                                                                                                                                                                                                         Scand.
                                                                                                                                                                                                                              protein A.
                                                                                                                                                                                                                                                                                                                                                            TISSUE=Plasma;
                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <del>-</del>
                                                                             protein.
                                                                                                                         Benson M.D.,
                                                                                                                                                                                                                                   (SAA) and of subspecies protein A.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ÷
                                         \overline{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE SPECIFICITY: PLASMA, SYNTHESIZED BY THE LIVER.
INDUCTION: UPON CYTOKINE STRUCTATION.
PTM: THIS PROTEIN IS THE PRECURSOR OF AMYLOID PROTEIN A, WHICH IS
FORMED BY THE REMOVAL OF RESIDUES FROM THE CARBOXYL END.
DISEASE: REACTIVE, SECONDARY AMYLOIDOSIS IS CHARACTERIZED BY THE
EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES OF THE SAA PROTEIN.
THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTEOLYSIS;
THEY DISRUPT TISSUE STRUCTURE AND COMPROMISE FUNCTION.
SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPLEX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION: MAJOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           horse.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42
                                                                                                     insertion
                                                                                                                                                                                                           Immunol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1
16
44
59
78
110 /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                   Dibartola isertion in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plasma; HDL; Amyloid
                                                            Med.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        110
80
16
44
59
78
78
6
                                                                                                                                              PubMed=2909653;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26:79-84(1987).
RACUTE PHASE REACTANT. APOLIPOPROTEIN OF
                                                          113:67-72(1989).
                                                                                                                                                                                                         35:217-224(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                       S.P.,
                                                                                                   the primary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A K - V C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G >
                                                                                                                           Dwulet F.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AMYLOID PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SERUM AMYLOID A PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EAE7DBE7AB007E5B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                     structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                  , Westermark P.;
serum amyloid protein
ited amyloid fibril
                                                                                                     of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 110;
                                                                                                     bovine amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein A (Amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                               Husby G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HDL
                                                                                                                                                                                                                                                                          ×
```

0

4

```
SAA_SEALS

AC P4281

AC ACBULA

AC NCBIL

AC NCBIL

AC NCBIL

AC TISSU

AC T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RANGE OF THE TRANSPORT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                              "The primary structure of serum amyloid A protein comparison with serum amyloid A in other species." Scand. J. Immunol. 39:88-94(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ovis aries (Sheep).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P42819;
01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence of the control of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHAIN
MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -I- PTM: THIS PROTEIN IS THE PRECURSOR OF AMYLOID PROTEIN A, WHICH IS FORMED BY THE REMOVAL OF RESIDUES FROM THE CARBOXYL END.
-I- DISEASE: REACTIVE, SECONDARY AMYLOIDOSIS IS CHARACTERIZED BY THE EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES OF THE SAA PROTEIN.
THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTEOLYSIS;
THEY DISRUPT TISSUE STRUCTURE AND COMPROMISE FUNCTION.
-I- SIMILARITY: BELONGS TO THE SAA FAMILY.
PIR; A60952, A60952.
InterPro; IPR000096; Serum_amyloid_A.
PETANG. PEROCOCC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE-Plasma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bovidae; Caprinae; Ovis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SAA_SHEEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Comp.
                                                                                                                                                                                                                                                                                                                                                                     -!- FUNCTION: MAJOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=94120345; PubMed=8290897;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Acute phase; Plasma; HDL; Amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   analysis."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Westermark P., .
"Bovine amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 3-48.
MEDLINE=87079535; PubMed=3791962;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scand. J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Husebekk A., Husby G., Sletten K., Skogen B., Nordstoga K.; "Characterization of bovine amyloid proteins SAA and AA."; Scand. J. Immunol. 27:739-743(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Husebekk A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NYDA 4
TISSUE SPECIFICITY: PLASMA, SYNTHESIZED BY THE LIVER.
INDUCTION: UPON CYTOKINE STIMULATION.
DISEASE: REACTIVE, SECONDARY ANYLOIDOSIS IS CHARACTERIZED BY THE
EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES OF THE SAA PROTEIN.
THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTEOLYSIS;
THEY DISRUPT TISSUE STRUCTURE AND COMPROMISE FUNCTION.
SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                 COMPLEX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE SPECIFICITY: PLASMINDUCTION: UPON CYTOKINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPLEX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION: MAJOR ACUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NYDA 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SM00197; SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PR00306; SERUMAMYLOID. PD002112; Serum_amyloi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PS00992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Johnson K.H., Westerma:
d protein AA: isolation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Serum_amyloid_A;
                                                                                                                                                                                                                                                                                                                                                                 ACUTE PHASE REACTANT. APOLIPOPROTEIN OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               iol. 85B:609-614(1986).
ACUTE PHASE REACTANT. APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PLASMA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 23; DB
Pred. No. 55;
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SERUM AMYLOID A PROTEIN.
AMYLOID PROTEIN A.
PYRROLIDONE CARBOXYLIC A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STIMULATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Westermark G
isolation and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      66E88810D4D49D34 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SYNTHESIZED BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .T., Sletten K., amino acid seque
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sletten
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sheep:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hayden
                                                                                                                                                                                                                                                                                                                                                                     THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                     HDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D.₩.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
```

```
RESULT 10
SAA1_MESAU
ID SAA12
AC P2072
DT 01-FE
DT 01-FE
DT 01-FE
DT 01-FE
Serum
                                                                                                                                                                                           RESULT 9
Y531_BUCAI
                                                                                                          밁
                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 4
                                                                                                                                                                     Query Match
                                                   _MESAU
SAA1_MESAU
         01-FEB-1996
01-FEB-1996
                              P20726;
01-FEB-1991
  Serum
                                                                                                                                                                                                                                                    entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restructed by non-profit institutions as long as its content
                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                     Hypothetical
                                                                                                                                                                                                              rfam; PF02635; DrsE; 1.
                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                            use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                  Buchnera sp. APS.";
Nature 407:81-86(2000).
-i- SIMILARITY: BELONGS TO THE UPFO116 (DSRF) FAMILY.
                                                                                                                                                                                                                                                                                                                                                         "Genome sequence of the endocellular bacterial symbuchnera sp. APS.";
                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=20445173; PubMed=10993077; Shigenobu S., Watanabe H., Hattori
                                                                                                                                                                                                                                                                                                                                                                                                                                                       symbiotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Buchnera aphidicola (subsp. Acyrthosiphon pisum) (Acyrthosiphon pisum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Acute phase; Plasma; HDL; Amylo1d. |
MOD_RES 1 1 PYRROLIDONE CARBOXYLIC ACID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00306; SERUMAMYLOID.
ProDom; PD002112; Serum_amyloid_A;
SMART; SM00197; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_proteins; 1. |
                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=Tokyo
                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=118099;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Bacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-OCT-2001
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                        112 NYDA 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00992; SAA;
                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40 NYDA 43
                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NYDA 4
amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BUCAI
                                                                                                                                                                                                                                   AP001119; BAB13224.1; -.
                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Proteobacteria; gamma subdivision; Buchnera
                                                                                                                                                                                                                          IPR003787;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        bacterium)
                                                                                                                                                                                           il protein;
119 AA; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               112 AA;
         (Rel.
(Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Rel. 40,
(Rel. 40,
(Rel. 40,
                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                         AA;
                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
         17,
33,
33,
protein
                                                                                                                                                                                         13506 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12688 MW;
                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BU531.
           Last annotation
                                Created)
                                                                                                                                                                                                     Complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                   Last sequence
precursor
                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                     PRT;
                                                                                                                                                 Pred. | No. 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 23;
Pred. No.
                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                        protéome.
C595F1215BE10938 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11A37FD59A8C1649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                    23;
                   update)
                                                   122 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119
                                                                                                                                                           58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55;
                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                                                             Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                        symbiont
                                                                                                                                                                    Length 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRC64;
                                                                                                                                                                                                                                                                                                                                                                                   Ishikawa
                                                                                                                                                                                                                                                                            bу
                                                                                                                                                                                                                                                                                               restrictions
                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                        of.
                                                                                                                                                                                                                                                                                                           EMBL
                                                                                                                                                                                                                                                                                       s.
                                                                                                                                                                                                                                                                                                                   a collaboration
                                                                                                                                                                                                                                                                                                                                                                                   Ή.
                                                                                                                                                0;
                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                           outstation
                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                             on
                                                                                                                                                                                                                                                                                       on
                                                                                                                                                                                                                                                                                               its
                                                                                                                                               0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

```
RESULT 11
SAALIJA
ID SAALI
IL J. B
                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                     Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                 SAA1_MOUSE
P05366;
01-NOV-1988
01-MAR-1989
30-MAY-2000
SEQUENCE FROM N.A.
MEDILINE-86250747; PubMed=3013853;
LOWell C.A., Potter D.A., Stearman R.
"Structure of the murine serum amyloi
conversion.";
J. Biol. Chem. 261:8442-8452(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-89352552; PubMed-2765510;
Webb C.F., Tucker P.W., Dowton S.B.;
"Expression and sequence analyses of serum amyloid A in the
                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                        SAA1.
                                                                                                                                                                      Serum amyloid
                                                                                                                                                                                                                                                         MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Biochemistry 28:4785-4790(1989).
-i- FUNCTION: MAJOR ACUTE PHASE REACTANT. APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mesocricetus auratus (Golden hamster).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
                                                                                                                                          Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART; SM00197; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR00306; SERUMAMYLOID. ProDom; PD002112; Serum_amyloi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_proteins; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                              NCBI_TaxID-10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Acute phase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR; B30248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                              59
                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES OF THE SAA PROTEIN. THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTEOLYSIS; SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - Buropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INDUCTION: UPON CYTOKINE STIMULATION DISEASE: REACTIVE, SECONDARY AMYLOIDO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE SPECIFICITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPLEX.
                                                                                                                                                                                                                                                                                                              NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M27242; AAA37095.1; -.
                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       non-profit institutions as long and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             requires a
                                                                                                                                                                                                                                                                                                                                                                                                                          19
122 p
                                                                                                                                                                   Rel. 09, (Rel. 10, 10) (Rel. 39, 10) (Rel. 39, 10)
                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 23; D
llarity 100.0%; Pred. No. 60
Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plasma; HDL; Amyloid; Signal; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     в30248.
                                                                                                                                                                                                                                                                                                                                                                                                                             A,
                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Serum_amyloid_A; 1
                                                                                                                                                                    protein
                                                                                                              Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                             14021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             license
                                                                                                                                                                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PLASMA,
                       , Stearman R.S., serum amyloid A
                                                                                                                                                                                                                                                                                                                                                                                                                           MW;
                                                                                                                                                                   precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                          SERUM AMYLOID A-1 PROTEIN.
12F36DB7310A1E68 CRC64;
                                                                                                            Craniata; Ver
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SYNTHESIZED BY
                                                                                                                                                                                                                                         122
                                                                                                            Vertebrata; Euteleostomi;
thi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                60;
                                                                                                                                                                                                                                         ΑA
                                          Morrow
                          gene family.
                                                                                                                                                                                                                                                                                                                                                                                               Usage
                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THE LIVER
                                                                                                                                                                                                                                                                                                                                                                                              Length 122;
                                         J.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          by and
                           Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ဝှု
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for
                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Syrian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          commercia!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOH
                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                   0
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                   SAA1_RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                   Best
                                                                                    "Rabbit serum amyloid protein A: expression deduced from cDNA sequences."; Scand. J. Immunol. 34:727-734(1991).
                                                                                                                                                                                                                                                  01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence up
01-OCT-1996 (Rel. 34, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the European Bioinformatics Institute. There use by non-profit institutions as long as modified and this statement is not removed. Use entitles requires a license agreement (See htt or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yamamoto K.-I., Migita S.;

"Complete primary structures of two major murine proteins deduced from cDNA sequences.";

Proc. Natl. Acad. Sci. U.S.A. 82:2915-2919(1985).

-i- FUNCTION: MAJOR ACUTE PHASE REACTANT. APOLIFO
                                                                                                                                     SEQUENCE FROM N.A. MEDLINE=92086827; PubMed=1721234;
                                                                                                                                                                                        Eukaryota; Metazoa; Mammalia; Eutheria;
                                                                                                                                                                                                   Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR; A23843; A23843.
PIR; A22675; A22675.
MGD; MGI:98221; Saa1.
InterPro; IPR000096; Serum_amyloid_A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [2]
SEQUENCE OF 9-122 FROM N.A.
MEDLINE-85190607; PubMed=3857624;
                                                                                                             Rygg M., Marhaug G.,
"Rabbit serum amyloi
                                                                                                                                                                                                                                         Serum amyloid A-1 protein
                                                                                                                                                                                                                                                                                          P53614;
                                                                                                                                                                                                                                                                                                        SAA1_RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00306; SERUMAMYLOID, PRODOM; PD002112; Serum_amyloismaRT; SMA, 1 1.

PROSITE; PS00992; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; M13521; AAA40084.1; EMBL; M11131; AAA40083.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Acute phase; Plasma;
                                                                                                                                                                            NCBI_TaxID=9986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00277; SAA_proteins;
                                                                                                                                                                                                                                                                                                                                                                     59
                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
         COMPLEX.
TISSUE SPECIFICITY: PLASMA, SYNTHESIZED BY THE
INDUCTION: UPON CYTOKINE STIMULATION.
DISEASE: REACTIVE, SECONDARY ANYLOIDOSIS IS CH
EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES
                                                                    nd. J. Immunol. 34:727-734(15)
FUNCTION: MAJOR ACUTE PHASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE SPECIFICITY: PLASMA, SYNTHESIZE INDUCTION: UPON CYTOKINE STIMULATION. SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPLEX.
                                                                                                                                                                                                                                                                                                                                                                     NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                     62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Serum_amyloid_A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13770
                                                                                                                                                                                       Lagomorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HDL; Signal; Multigene family
                                                                                                                            Husby
 HIGHLY INSOLUBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WW;
                                                                                                                                                                                                                                         precursor.
                                                                                                                            G., Dowton
                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SERUM AMYLOID A-1 PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OAEF6D5F208EA4D0 CRC64;
                                                                           REACTANT. APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SYNTHESIZED
                                                                                                                                                                                       Leporidae; Oryctolagus
                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                              23;
                                                                                                                                                                                                                                                                                                                                                                                                                                   No.
                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                       122
                                                                                                                            S.B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (See http://www.isb-sib.ch/announce/
 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                   60;
                                                                                                                                                                                                                                                                                                       A
                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APOLIPOPROTEIN
                                                                                                              and primary structure
                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ЗΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   its content
                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                  THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THE
                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 122;
 CHARACTERIZED
ES OF THE SAA F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        serum
                                                  LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
ERIZED BY THE SAA PROTEIN.

PROTEOLYSIS;
                                                                           ဓ္ဌ
                                                                           THE
                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for
                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                           HDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       n no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

```
SAA2_MI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
   This wars recommended the European Bioinformatics Institute. There are no restrictions on the European Bioinformatics Institute. There are no restrictions on the European Bioinformatics as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-FEB-1991 (Rel. 1
01-FEB-1991 (Rel. 1
01-OCT-1996 (Rel. 3
Serum amyloid A-2 p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _MESAU
                                                                                                                                                                                                                                                                           Biochemistry 28:4785-4790(1989).
-i- FUNCTION: MAJOR ACUTE PHASE REACTANT. APOLIPOPROTEIN OF
                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. MEDLINE-89352552;
                                                                                                                                                                                                                                                                                                                                          Webb C.F.,
                                                                                                                                                                                                                                                                                                                     "Expression and sequence
                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10036;
                                                                                                                                                                                                                                                                                                                                                                                                                   Mesocricetus
                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mesocricetus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SAA2_MESAU
P20727;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Acute phase; Plasma; HDL; Amyloid; Signal; Multigene family.

SIGNAL 1 19 BY SIMILARITY.

CHAIN 20 12 SERUM AMYLOID A-1 PROTEIN.

SEQUENCE 122 AA; 13655 MW; 98822631B36B2B98 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00992; SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART; SM00197; SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PR00306; SERUMAMYLOID. ProDom; PD002112; Serum_amyloi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00277;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement (See http://www.isb-sib.ch/announce, or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          between the Swiss Institute of Bioinformatics and the I
the European Bioinformatics Institute. There are no rest
use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; S71722; AAB20616.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                     INDUCTION: UPON CYTOKINE STIMULATION.
DISEASE: REACTIVE, SECONDARY AMYLOIDOSIS IS CHARACTERIZED EXTRACELULAR ACCUMULATION IN VARIOUS TISSUES OF THE SAA PTHESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTE THEY DISRUPT TISSUE STRUCTURE AND COMPROMISE FUNCTION.
SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                  TISSUE SPECIFICITY: PLASMA,
                                                                                                                                                                                                                                                                    COMPLEX
                                                                                                           SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THEY DISRUPT TISSUE STRUCTURE AND COMPROMISE FUNCTION SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SWISS-PROT entry is copyright. It is produced through the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                       352552; PubMed=2765510; Tucker P.W., Dowton S.B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPR000096; Serum_amyloid_A.
                                                                                                                                                                                                                                                                                                                                                                                                                              auratus (Golden )
etazoa; Chordata;
theria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SAA_proteins; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17, Last sequence update)
34, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Serum_amyloid_A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                         analyses of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            hamster).
                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Cricetinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 23;
                                                                                                                                                                                                                                                SYNTHESIZED BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                      serum amyloid A in the Syrian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122 AA
                                                                                                                                                                                                                                               THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      restrictions
                                                                                                                                                                                    PROTEOLYSIS;
                                                                                                                                                                                                  SAA PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a collaboration -
                                                                                                              collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for
                                                                                                                                                                                                                                                                            IGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
RESULT 14
SAA2_MOUSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DR DR DR DR DR SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                              de Beer M.C., de Beer F.C., Beach C.M., C
"Mouse serum amyloid A protein. Complete
analysis of a new isoform.";
Biochem. J. 283:673-678(192).
                                                                                  -!- TISSUE
                                                                                                                                                                                                                                              MEDLINE=87309776; PubMed=3624868; Yamamoto K.I., Goto N., Kosaka J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1988 (Rel. 09, Created)
01-NOV-1988 (Rel. 09, Last sequence up
16-OCT-2001 (Rel. 40, Last annotation
Serum amyloid A-2 protein precursor [(
Amyloid fibril protein AA)].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
SEQUENCE
                                                                                                        -!- FUNCTION: MAJOR ACUTE
                                                                                                                                                                MEDLINE=92272662; PubMed=1590757;
                                                                                                                                                                                        SEQUENCE OF
                                                                                                                                                                                                                        implications
                                                                                                                                                                                                                                   "Structural diversity of murine serum amyloid
                                                                                                                                                                                                                                                                       SEQUENCE OF
                                                                                                                                                                                                                                                                                                        proteins deduced
                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=86250747;
Lowell C.A., Potte
                                                                                                                                                                                                                                                                                                                  "Complete primary structures of two
                                                                                                                                                                                                                                                                                                                              Kamamoto K.-I., Migita S.,
                                                                                                                                                                                                                                                                                                                                         MEDLINE=85190607;
                                                                                                                                                                                                                                                                                                                                                                                         conversion
                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID-10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SAA2_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Acute phase;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART; SM00197; SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00277; SAA_proteins; 1
PRINTS; PR00306; SERUMAMYLOID.
ProDom; PD002112; Serum_amyloi
                                                                                                                                                                                                                                                                                                                                                                                          "Structure of the conversion.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P05367;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00992;
                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000096; Serum_amyloid_A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             59 NYDA 62
TISSUE SPECIFICITY: PLASMA, SYNTHESIZED BY THE LIVER.
INDUCTION: UPON CYTOKINE STIMULATION.
PTM: THIS PROTEIN IS THE PRECURSOR OF AMYLOID PROTEIN A, WHICH IS
FORMED BY THE REMOVAL OF RESIDUES FROM THE CARBOXYL END.
DISEASE: REACTIVE, SECONDARY AMYLOIDOSIS IS CHARACTERIZED BY THE
EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES OF THE SAA PROTEIN.
THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTEOLYSIS;
THEY DISRUPT TISSUE STRUCTURE AND COMPROMISE FUNCTION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                              COMPLEX.
                                                                                                                                                                                                                                                                                            Natl. Acad. Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                           Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19
122 AA;
                                                                                                                                                                                       20-122.
                                                                                                                                                                                                                                                                       32-122 FROM N.A.
                                                                                                                                                                                                            139:1683-1688(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                               Potter D.A., Stearman R.S
f the murine serum amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plasma;
                                                                                                                                                                                                                                                                                                                                                                          261:8442-8452(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                               from cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                         PubMed=3857624;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=3013853;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122
14110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Serum_amyloid_A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; HDL; Amyloid;
                                                                                                                                                                                                                                                                                            U.S.A. 82:2915-2919(1985).
                                                                                                      PHASE REACTANT. APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 23; DB
Pred No. 60;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SERUM AMYLOID A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D99EC964B1C4C22F
                                                                                                                                                                                                                                               Shiroo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Signal; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contains:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                                                                                ₽;
                                                                                                                                        Carreras I.,
e amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60;
                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                            Morrow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                 A genes.
                                                                                                                                                                                                                                             Yeul Y.D.,
                                                                                                                                                                                                                                                                                                                                                                                               family. Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 122;
                                                                                                                                         sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi; 
Murinae; Mus
                                                                                                                                                    Sipe
                                                                                                                                                                                                                                 ., Migita S.;
Evolutionary
                                                                                                                                                                                                                                                                                                                 amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                       Q
                                                                                                                                                    J.D.;
                                                                                                       THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                         WHICH IS
                                                                                                                                        and mRNA
                                                                                                       HDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

This SWI between

MISCELLANEOUS: SAA2 IS THE SIMILARITY: BELONGS TO THE

SAA FAMILY

PREFERRED AMYLOID-FORMING PRECURSOR

a collaboration

9

its

the European Bioinformatics Institute.

```
RESULT 15
SAA2_RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                          01-AUG-1991 (Rel. 19, Created)
01-AUG-1991 (Rel. 19, Last sequence up
01-OCT-1996 (Rel. 34, Last annotation
Serum amyloid A-2 protein precursor.
SEQUENCE FROM N.A.
MEDLINE-92086827; PubMed-1721234;
Rygg M., Marhaug G., Husby G., Do
"Rabbit serum amyloid protein A:
                                                                     Ray B.K., Ray A.;
"Complementary DNA cloning and nucleotide sequence
                                                                                                                                "Molecular cloning, nucleotide séquence heterozygosity and regulation of rabbit serum amyloid A cDNA."; Nucleic Acids Res. 18:7447-7447(1990).
                                                                                                                                                                            MEDLINE-91081342; PubMed-2259638; Tatum F., Alam J., Smith A., Morg
                                                                                                                                                                                                                                                            Eukaryota;
                                                                                                                                                                                                                                                                        Oryctolagus
                                                                                                                                                                                                                                                                                                                                                          SAA2_RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PR00306; SERUMAMYLOID.
ProDom; PD002112; Serum_amyloid_A;
SMART; SM00197; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_proteins; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; M13522; AAA40086.1; -. EMBL; M11130; AAA40085.1; -. EMBL; M17791; AAA40087.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                         SEQUENCE FROM N.A. MEDLINE-91298985;
                                                                                                                                                                                                      TISSUE-Liver;
                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                       NCBI_TaxID=9986;
                                                                                                                                                                                                                                                  Eukaryotă; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Acute phase; Plasma; HDL; Amyloid; Signal; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00992; SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                   59
                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R; B23843; B23843.
R; B22675; B22675.
R; S21287; S21287.
D; MGI:98222; Saa2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SWISS-PROT entry is copyright. It is produced through a collal een the Swiss Institute of Bioinformatics and the EMBL outsi European Bioinformatics Institute. There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                  NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                               4,
                                                          A protein.";
Biophys. Re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    non-profit institutions as long as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
122 /
                                                                                                                                                                                                                                                         cuniculus (Rabbit).
Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; ilarity 100.0%; Conservative 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₹,
                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                             Res.
                                                                                                         PubMed=1712590;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
122
92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
13622
                                                                                                                                                                                                                                                  Lagomorpha; Leporidae; Oryctolagus
                                                           Commun.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AMYLOID PROTEIN A.
A -> D (IN STRAIN SJL/J).
99E79D6FF97E96E0 CRC64;
                                                                                                                                                                             Morgan W.T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 23; DB Pred. No. 60; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SERUM AMYLOID A-2 PROTEIN
                                                                                                                                                                                                                                                                                                                                                         PRT;
             Dowton
                                                          178:68-72(1991).
  expression
                                                                                                                                                                                                                                                                                                        update)
on update)
                                                                                                                                                                                                                                                                                                                                                         122
             S.B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                       AA
 and primary structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                 of rabbit serum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       уd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       n no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
RESULT 16
SAA3_HUMAN
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; X16428; CAA34451.1; -.
EMBL; X16427; CAA34450.1; -.
EMBL; X71725; AAB20617.1; -.
PIR; JN0076; JN0076.
PIR; S13704; S13704.
PIR; S13705; S13705.
PIR; S14355; S14435
InterPro; IPR000096; Serum_amy
Pfam; PF00277; SAA_proteins; 1
                                                                                                                                                                                                                                                                                                                                                                                                                     VARIANT
CONFLICT
SEQUENCE
[2]
SEQUENCE FROM N.A.
MEDLINE-92096115; Pubmed-1755958;
MEDLINE-92096115; Pubmed-1755958;
                                                                                                                                         Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
NCBI_TaxID=9606;
                                                                                                                                                                                                              P22614; 095735;
01-AUG-1991 (Rel. 19, Created)
01-AUG-1991 (Rel. 19, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00306; SERUMAMYLOID.
ProDom; PD002112; Serum_amyloid_A;
SMART; SM00197; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     deduced from cDNA sequences.";
Scand. J. Immunol. 34:727-734(1991).
-!- FUNCTION: MAJOR ACUTE PHASE REACTANT. APOLIPOPROTEIN OF
                                                           Gene
                                                                                                                                                                                           Putative serum amyloid A-3 protein. SAA3P OR SAA3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  modified and this statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioliformatics and the Entropean Bioinformatics Institute. There are no restructed by non-profit institutions as long as its content
                                                                                  "The human ser
                                                                                                         SEQUENCE FROM N.A. MEDLINE=90128298; PubMed=2558975;
                                                                                                                                                                                                                                                               SAA3_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Acute phase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPLEX.
-!- TISSUE SPECIFICITY: PLASMA,
                                                                                                                                                                                                                                                                                                                                                                       Local Similarity tes 4; Conserv
                                                                                                                                                                                                                                                                                                                          59
                                                                                                                                                                                                                                                                                                                                               1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THEY DISRUPT TISSUE STRUCTURE AND COMPROMISE SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INDUCTION: UPON CYTOKINE DISEASE: REACTIVE, SECOND
                                            unman serum amyloid A (SAA)-encoding ence and possible autocrine-collagense84:509-515(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISEASE: REACTIVE, SECONDARY AMYLOIDOSIS IS CHARACTERIZED BY THE EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES OF THE SAA PROTEIN. THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTEOLYSIS:
                                                                                                                                                                                                                                                                                                                          NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PS00992; SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                       122 AA;
                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                             20
96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plasma;
                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                  19
122
96
40
13451
                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HDL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Serum_amyloid_A.
                                                                     oid A (SAA)-encoding gene GSAA1: autocrine-collagenase-inducer fu
                                                                                                                                                                                                                                                                                                                                                                                                                       MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amyloid; Signal;
                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                 s a
' '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STIMULATION
                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SERUM AMYLOID A-2 PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                    Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                     -> D.
-> T (IN REF. 2).
C135BEE727C57C15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SYNTHESIZED
              Benson M.D.;
                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                             23;
                                                                                                                                                                                                                                                                 122
                                                                                                                                                                                                                                                                                                                                                                                    60;
                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                               BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                               1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BY THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Usage
                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                              Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                       CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION
                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bу
                                                                         function
                                                                                  nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       THE
                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HDL
                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           its
                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
RESULT 17
SAA3_MESAU
                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                     01-FEB-1991 (Rel. 1
01-FEB-1991 (Rel. 1
01-JUN-1994 (Rel. 2
Serum amyloid A-3 [
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hypothetical
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                         SEQUENCE FROM N.A. MEDLINE=90318412; PGervais C., Suh M.;
                   THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTHEY DISRUPT TISSUE STRUCTURE AND COMPROMISE-1- SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                           "Serum amyloid A protein-related mRNA expression virus type 2-transformed hamster cells."; Mol. Cell. Biol. 10:4412-4414(1990).
-i- EUNCTION: MAJOR ACUTE PHASE REACTANT. APOLIPO
                                                                                                                                                                                                                        Mesocricetus auratus (Golden hamster).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
                                                                                                                                                                                                                                    Mesocricetus auratu:
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                     SAA3_MESAU
P19453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El the European Bioinformatics Institute. There are no rest
                                                                                                                                                                                                     NCBI_TaxID=10036;
                                                                                                                                                                                                                 Mesocricetus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIR; JN0029; JN0029.
Genew; HGNC:10515; S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; X13895; CAA32096.1; ALT_INIT.
EMBL; S73444; -; NOT_ANNOTATED_CDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entities requires a license agreement (Some send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified and this statement is not removed. (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "NONexpression of the human serum amyloid DNA Cell Biol. 10:651-661(1991).
-i- FUNCTION: MOST PROBABLY A PSEUDOGENE.
-i- SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00277; SAA_proteins;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000096; Serum_amyloid_A
                                                                                                                                                                                                                                                                                                                                                                                      59 NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                  1 NYDA 4
                                                                TISSUE SPECIFICITY: PLASMA, SYNTHESIZED BY TINDUCTION: UPON CYTOKINE STIMULATION.
DISEASE: REACTIVE, SECONDARY AMYLOIDOSIS IS
                                                                                                    COMPLEX.
                                                       EXTRACELLULAR ACCUMULATION IN VARIOUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SM00197; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PR00306; SERUMAMYLOID. PD002112; Serum_amyloi
                                                                                                                                                                                                                                                                                                                                                                                                                                  4.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PS00992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
32
37
49
57
57
                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA;
                                                                                                                                                                                                                                                                                                                               STANDARD;
entry
                                                                                                                                                                                                                                                                                  . 17, Created)
. 17, Last sequ.
. 29, Last anno
                                                                                                                                                                     PubMed=2164641;
                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Serum_amyloid_A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SAA3P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49
57
69
13440 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        32
37
                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                Last sequence update)
is copyright.
                                                                                                                                                                                                                                                                       precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T -> Y (IN REF. 2).
A -> T (IN REF. 2).
R -> K (IN REF. 2).
K -> N (IN REF. 2).
R -> N (IN REF. 2).
R -> W (IN REF. 2).
PGG -> LGA (IN REF. 2).
W; 70F0BCC052E08472 C
                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   serum amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                          23;
No.
Ιt
                                                                                                                                                                                                                                                                                                                              122
                                                                                                                                                                                                                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (See http://www.isb-sib.ch/announce/
is
                                           AND RESISTANT TO PROD
                                                                                                                                                                                                                                                                                                                                                                                                                                            60;
                                                                                                                                                                                                                                                                                                                              Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВВ
produced
                                                                                                            APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A three
                                                                                       BY THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRC64;
                                                                 CHARACTERIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 122;
                               FUNCTION
                                                                                                                                              in herpes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SAA3) gene.";
                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
through
                                                                                       LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gh a collaboration -
                                           PROTEOLYSIS;
                                                                                                              엵
þ
                                                                                                                                              simplex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                       PROTEIN.
                                                                                                              THE
                                                                                                                                                                                                                                                                                                                                                                                                                               0;
collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in
                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        on
                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

RESULT SAA3_M CCCCRTTAN Вp ğ Query Match Best Local Matches 13-AUG-1987 13-AUG-1987 30-MAY-2000 SEQUENCE FROM N.A.

MEDILINE-86120372; PubMed-3003697; |
Stearman R.S., Lowell C.A., Peltzman

The sequence and structure of a new

Nucleic Acids Res. 14:797-809(1986). ÷ : Stearman R.S., Lowell C.A., Pearson W.R., Morn "Regulation of synthesis of amyloid A-related Ann. N.Y. Acad. Sci. 389:106-115(1982). SEQUENCE OF 27-64 FROM N.A. STRAIN=BALB/c; TISSUE-Liver; MEDLINE-82229376; PubMed-6953913; MOUSE Yamamoto K.I., Goto N., Kosaka J., "Structural diversity of murine se MEDLINE=87309776; PubMed=3624868; SEQUENCE OF 32-122 FROM N.A. MEDLINE=86250747; PubMed=3013853; Lowell C.A., Potter D.A., Stearman STRAIN-Swiss SEQUENCE FROM N.A Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae Mus musculus SAA3 Serum amyloid SAA3_MOUSE CHAIN PRINTS; PR00306; SERUMAMYLOID.
ProDom; PD002112; Serum_amyloid_A;
SMART; SM00197; SAA; 1. entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch). modified and this statement is not implications NCBI_TaxID=10090; P04918; SEQUENCE SIGNAL Acute phase; Plasma; HDL; PIR; A35660; EMBL; M33431; AAA37098.1; -. PROSITE; PS00992; SAA; InterPro; the European between 59 NYDA 62 Biol. 1 NYDA 4 Immunol. TISSUE SPECIFICITY: FOUND IN VARIOUS FUNCTION: COMPLEX. PF00277; SAA_proteins; Q62201 4. Similarity Chem. the IPR000096; Serum_amyloid_A. (Rel. (Rel. (Rel.) (Rel. 122 AA; 139:1683-1688(1987) N: MAJOR ACUTE PHASE Conservative (Mouse). A35660. Bioinformatics Institute. 19 Swiss Institute of Bioinformatics 261:8442-8452(1986); STANDARD; 05, Created)
05, Last sequence up
39, Last annotation protein precursor. 13814 MW; institutions as long tatement is not removed. 100.0%; .0%; Stearman'R.S serum amyloid PHASE Amyloid; 0 Score Pred. SERUM PRT; 0DD15D7505518D8A serum REACTANT. Mismatches Shiroo rum amyl AMYLOID signal; on update) No. C 122 serum .G., Þ There are no gene Morrow A DB M., APOLIPOPROTEIN Morrow J.F.; A-3 as its content amyloid Multigene family. Morrow Muridae; Murinae; 1; Usage Yeul Y.D A genes. protein."; ow J.F.; family. 0 PROTEIN and the Length 122; CRC64; J.F. Y.D. Indels Þ Euteleostomi; gene."; Gene restrictions ., Migita S.; Evolutionary and Q. EMBL outstation THE 0; for 'n Gaps Ħ no 9 way 0;

```
RESULT
SAA3_RA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; X03479; CAA27199.1; -
EMBL; X03505; CAA27219.1; J
EMBL; X03506; CAA27219.1; J
EMBL; X03507; CAA27219.1; J
EMBL; X03507; CAA27219.1; J
EMBL; M25467; AAA37231.1; -
EMBL; M17792; AAA40088.1; -
EMBL; M1792; AAA40088.1; -
PIR; A23521; A23521.
PIR; C23843; C23843.
MGD; MGI:98223; Saa3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
SEQUENCE
                                                                                                                                                       Mitchell T.I., Coon C.I., Brinckerhoff C.E.;
"Serum amyloid A (SAA3) produced by rabbit synovial fibroblasts treated with phorbol esters or interleukin 1 induces synthesis collagenase and is neutralized with specific antiserum.";
J. Clin. Invest. 87:1177-1185(1991).
                                                                                                                                                                                                                            SEQUENCE FROM N.A. MEDLINE-91185595; PubMed=1849144;
                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                         SAA3_RABIT
P35543;
                                                                                                                                                                                                                                                                                                                                                                                                                                      RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00277; SAA_proteins; 1.
PRINTS; PR00306; SERUMAMYLOID.
ProDom; PD002112; Serum_amyloid_A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MGD; MGI:9823; Saa3.
InterPro; IPRO00096; Serum_amyloid_A.
InterPro; IPRO00096; Serum_amyloid_A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collable between the Swiss Institute of Bioinformatics and the EMBL outsithe European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in
                                                                                                                                                                                                                                                                       NCBI_TaxID=9986
                                                                                                                                                                                                                                                                                                                    Oryctolagus cuniculus (Rabbit)
                                                                                                                                                                                                                                                                                                                                                  Serum amyloid
                                                                                                                                                                                                                                                                                                                                                              01-JUN-1994
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                         01-JUN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Acute phase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART; SM00197; SAA; 1. PROSITE; PS00992; SAA;
                           -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             59 NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                        TISSUE SPECIFICITY: PLASMA, SYNTHESIZED BY THE LIVER.
INDUCTION: UPON CYTOKINE STIMULATION.
DISEASE: REACTIVE, SECONDARY AMYLOJOOSIS IS CHARACTERIZED BY THE
EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES OF THE SAA PROTEIN.
THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTEOLYSIS;
THEY DISRUPT TISSUE STRUCTURE AND COMPROMISE FUNCTION.
SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INDUCTION: UPON CYTOKINE STIMULATION. SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                          FUNCTION: MAJOR ACUTE PHASE REACTANT. APOLIPOPROTEIN
                                                                                                                               COMPLEX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
57
122 AA;
                                                                                                                                                                                                                                                                                                                                               (Rel.
(Rel.
(Rel.
id A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; Plasma; HDL;
1 19
20 122
57 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                        29, Created)29, Last sequence update)34, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                protein precursor.
                                                                                                                                                                                                                                                                                       Chordata; Craniata; Vertebrata; Euteleostomi; Lagomorpha; Leporidae; Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13773 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Signal; Multigene family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SERUM AMYLOID A-3 PROTEIN R -> G (IN REF. 4).; B9435F82DlB0B705 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60;
                                                                                                                                                                                                                                                                                                                                                                                                                       ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a collaboration -
                                                                                                                                             THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                     0f
                                                                                                                                             HDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

This

SWISS-PROT entry

įs

copyright.

Ιt

is produced through a

collaboration

RESULT 20 SAA_HUMAN δÃ SO THE ENGINEER OF THE ENGINEE В Query Match Best Local Matches SAA_HUMAN STANDARD; PRT; 122 AA. P02735; P02736; P02737; Q16879; Q16835; 21-JUL-1986 (Rel. 01, Created) 01-AUG-1990 (Rel. 15, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Serum amyloid A protein precursor (SAA) [Contains: (Amyloid fibril protein AA)]. between the Euro MEDLINE-89034862; PubMed-3183061; Kluve-Beckerman B., Dwulet F.E., Benson M. SEQUENCE FROM N.A. MEDLINE-87099785; PubMed-3800865; Kluve-Beckerman B., Long G.L., Be Woo P., Sipe J., Dinarello C.A., Colt "Structure of a human serum amyloid A expression in transfected L cells."; J. Biol. Chem. 262:15790-15795(1987). DNA. processing Sipe J.D., Colten H.R., Goldberger Cohen A.S., Whitehead A.S.; "Human serum amyloid A (SAA): biosy Homo sapiens (Human) Eukaryota; Metazoa; (Mammalia; Eutheria; I Acute phase; Plasma; HDL; Amyloid; Signal; Multigene family.
SIGNAL 1 18 BY SIMILARITY.
CHAIN 19 122 SERUM AMYLOID A-3 PROTEIN. SMART; SM00197; SAA; 1. InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_proteins; 1. PIR; entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch). use by non-profit institutions as long as modified and this statement is not removed. Use thites requires a license agreement (See htt "Human serum amyloid A. Three hepatic proteins in one person."; Biochem. SEQUENCE FROM N.A. MEDLINE-88058926; Biochemistry 24:2931-2936(1985) SEQUENCE FROM N.A. MEDLINE-85252712; PubMed-3839415; SEQUENCE PROSITE; PS00992; SAA; PRINTS; PR00306; SERUMAMYLOID.
ProDom; PD002112; Serum_amyloid_A; EMBL; M64696; SEQUENCE (SAA). DNA sequence evidence 59 NYDA 62 1 NYDA 4 ween the Swiss Institute of Bioinformatics and the EMBL outs European Bioinformatics Institute. There are no restrictions AND SAA2 S32574; S32574. Similarity 4; Conserv FROM Genet. of preSAA and 122 AA; Conservative N.A. AAA31464.1; -. 24:795-803(1986). PubMed=2890635; (SAA1 Chordata; Primates; 13806 MW; 100.0%; ig G.L., Benson N for polymorphic (SAA): blosynthesis and structural 0; Score 23; Pred. No. Craniata; V Catarrhini; Benson M.D.; 77E0F502D4284C0B Mismatches Colten H.R.; G., nthesis and postsynthetic variants defined by complementary A gene mRNAS Edge forms of human Vertebrata; 60 DB 1; Length 122; . D. ; Hominidae; and modulation of its and M.D., Usage its content 0; the CRC64; Tack Indels Amyloid corresponding Euteleostomi; γd serum amyloid and protein 0 tor outstation in Gaps n no way no 0

```
amyloidosis.";
Scand. J. Immunol. (15)
                          SEQUENCE OF 19-101 (BOL).

MEDILINE-80213686; PubMed-6155694;

MOYNET K., Sletten K., Husby G., Natvig J.B.;

"An unusually large (83 amino acid residues) amyloid fibril

AA from a patient with Waldenstrom's macroglobulinaemia and
                                                                                                                                                           Sletten K., Husby G.;
"The complete amino-acid sequence of non-immunoglobulin amyloid fibril protein AS in rheumatoid arthritis.";
Eur. J. Biochem. 41:117-125(1974).
                                                                                                                       [13]
SEQUENCE OF 19-82 (JL).
SEQUENCE OF 19-82 (JL).
Natvig J.B.;
                                                                                                                                                                                                  SEQUENCE OF 19-94 (TH)
MEDLINE-74120351; PubMed-4816450;
Sletten K., Husby G.;
                                                                                                                                                                                                                                                     MEDITINE (ASSOCIATION OF THE PROPERTY W.D., Magnotta J., Glenne and anyloid fibril protein
                                                                                                                                                                                                                                                                                                                                   Levin
                                                                                                                                                                                                                                              "Amino acid sequence of an amyloid J. Biol. Chem. 247:5653-5655(1972).
                                                                                                                                                                                                                                                                             SEQUENCE OF 19-94
MEDLINE=72266694;
                                                                                                                                                                                                                                                                                                                         some
                                                                                                                                                                                                                                                                                                                                                                                     Biochemistry
                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-88163487; Pu
Prelli F., Pras M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-92189607;
Beach C.M., de Be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Amino acid sequence of amylolar number human high-density lipoprotein."; buman high-density 21:3298-3303(1982).
                                                                                                                                                                                                                                                                                                                                                       MEDLINE=72268653;
                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         variant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Heterogeneity of
                                                                                                                                                                                                                                                                                                                                                                                                           "Degradation and
                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Human serum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Walsh K.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Parmelee D.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=83000248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=90262544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                              ten K., Husby G., Natvig J.B.;
complete amino acid sequence of
ual size (64 residues)."
hem. Biophys. Res. Commun. 69:19-
                                                                                                                                                                                                                                                                                                                   amino acid sequence of a major nonimmunoglobulin amyloid fibrils.";
                                                                                                                                                                                                                                                                                                                                                                OF 19-94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OF 19-122 (VARIANT 1-BETA)
                                                                                                                                                                                                                                                                                                              Invest.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Invest.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (JAN-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                          20-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                             282:615-620(1992).
                                                                                                                                                                                                                                                                                                                                                                                    26:8251-8256(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 de Beer M.C., Sipe J.D., amyloid A protein. Comp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   one
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Titani
                                                                                                                                                                                                                                                                                                                                                                                                        M., Frangione B.;
deposition of amyloid
                                                                                                                                                                                                                                                                                                          51:2773-2776(1972)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82:1670-1675(1988)
                                                                                                                                                                                                                                                                              PubMed=5055786;
                                                                                                                                                                                                                                                                                                                                                     (FAMILIAL MEDITERRANEAN PubMed=5056669;
                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed=3442653;
                                                                                                                                                                                                                                                                                      (TUBERCULOSIS PATIENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=1971508;
Weiss E.H., Schwaeble W., Linke R.P.
human serum amyloid A protein. Five
individual demonstrated by cDNA sequ
           11:549-554(1980)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=1546977;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PubMed=7115671;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (SAA2 ALPHA).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ×.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          amyloid-related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ericsson
                                                                                            69:19-25(1976)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Г.н.,
                                                                                                                  an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Loose L.D.,
                                                                                                                                                                                                                                                                                                                                                                                                        AA fibrils
                                                                                                                  amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         apoprotein (apoSAA1) from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eriksen
                                                                                                                                                                                                                                                                                                                                                               FEVER
                                                                                                                                                                                                                                                     Glenner G.G.;
rotein of unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ., de
acid
                                                                                                                   fibril
                                                                                                                                                                                                                                                                                                                                                               PATIENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Z,
                                                                                                                                                                                                                                                                                                                                                                                                        are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Beer F.C.;
sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Benditt E.P.,
                                                                                                                                                                                                                                                                                                                              component
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         different
                                                                                                                                                                                                                                                                                                                                                                                                        tissue
                                                                                                                  protein
                                        protein
                                                                                                                                                                                                                                                      origin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                മ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               new
                                                                                                                  of
```

EMBL; PIR; PIR; PIR;

EMBL;

```
EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
                                                                                                                                                                                                                                                                                            EMBL;
EMBL;
EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entitles requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib;ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chromatography/electrospray ionization Electrophoresis 17:866-876(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Benditt E.P., Eriksen N., Her "The major proteins of human properties including unusual FEBS Lett. 19:169-173(1971).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Characterization of human serum amyloid A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ducret A., Br
Aebersold R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PARTIAL SEQUENCE (VARIOUS ISOFORMS), MEDLINE=96377164; PubMed=8783012; | Ducret A., Bruun C.F., Bures E.J., M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arch. Biochem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ıs
İs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Baba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      evolution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 32-122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 19
Benditt E.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VARIANT 1-GAMMA.
MEDLINE=93290347;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Betts J., Edbrooke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=92022342;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "The human acute-phase serum amyloid
L; M10906; AAA60297.1; -...
L; J03474; AAB59539.1; -...
L; M23698; AAA64799.1; -...
L; M23699; AAA64800.1; -...
L; M26152; AAA85338.1; -...
L; BC020795; AAA953804.1; -...
L; X51439; CAA35804.1; -...
L; X51440; CAA35806.1; -...
L; X51441; CAA35806.1; -...
J; X51442; CAA35807.1; -...
3L; X51444; CAA35807.1; -...
3L; X51445; CAA35807.1; -...
3L; X51445; CAA35809.1; -...
3L; X51445; CAA35810.1; -...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DLINE=93290347; PubMed=8512321;
ba S., Takahashi T., Kasama T., Fujie M., Shi
novel polymorphism of human serum amyloid A
characterized by alanines at both residues 5
ch. Biochem. Biophys. 303:361-366(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s SWISS-PROT entry is copyright. It is produced through a collab
ween the Swiss Institute of Bioinformatics and the EMBL outst
European Bioinformatics Institute. There are no restrictions
by non-profit institutions as long as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISEASE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTECLYSIS; THEY DISRUPT TISSUE STRUCTURE AND COMPROMISE FUNCTION.

DISRASE: BOL IS FROM A PATIENT WITH WALDENSTROM'S

MACROGLOBULINEMIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               two-dimensional electrophoresis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1-ALPHA.
DISEASE: REACTIVE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOXYL END. POLYMORPHISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HERE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INDUCTION: UPON CYTOKINE STIMULATION.
PTM: THIS PROTEIN IS THE PRECURSOR OF AMYLOID
FORMED BY THE REMOVAL OF APPROXIMATELY 24 RES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE SPECIFICITY: PLASMA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPLEX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MORPHISM: BOTH SAA1 AND SAA2
THE NOMENCLATURE OF REF.6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OF 19-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and expression in hepatoma cells.";
Immunol. 34:471-482(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JL IS FROM A PATIENT WITH ANK
TH IS FROM A PATIENT WITH JUV
TY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=1656519;
e M., Thakker R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hermodson M.A.,
man and monkey a
ual N-terminal a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SYNTHESIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REACTANT. APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Λq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Marhaug
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Woo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HAVE A NUMBER OF A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AND METHYLATION OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             oid A protein isoforms
liquid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ANKYLOSING
JUVENILE RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tandem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ., Ericsson L.H.; amyloid substance:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Shirasawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       family:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A protein, SAA1 52 and 57.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESIDUES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THE LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Husby
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NG SPONDYLITIS.
RHEUMATOID ARTHRITIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROTEIN A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         structure,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALLELES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Η.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              common
                                                                                                                                                                                                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     separated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WHICH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gamma,
                                                                                                                                                                                                                                                                                                                                                                                                                              .ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OF WE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                    way
cial
```

```
RESULT
SAA_ANA
  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                D D D D D D D D D D D D D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN-Pekin breed; TISSUE-Liver;
MEDLINE-97121423; PubMed-8962089;
MEDLINE-971214C1, Mason W.S., Pugh J.C.;
Guo J.T., Aldrich C., Mason W.S., Pugh J.C.;
"Characterization of serum amyloid A protein mRNA expression secondary amyloidosis in the domestic duck.";
Proc. Natl. Acad. Sci. U.S.A. 93:14548-14553(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SAA_ANAPL STANDARD: PRT; 127 AA. P02740; Q92034; 21-JUL-1986 (Rel. 01, Created) 01-NOV-1997 (Rel. 35, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Serum amyloid A protein precursor (SAA).
                                                                                                                                                                                                                                                                                                                                   Ericsson L.H., Eriksen N., Walsh K.A., Benditt E.P.;
"Primary structure of duck amyloid protein A. The form deposited tissues may be identical to its serum precursor.";
FEBS Lett. 218:11-16(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIR;
PIR;
PIR;
PIR;
PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Anas platyrhynchos (Domestic duck) Eukaryota; Metazoa; Chordata; Cran
                                                                                                                                                                                                                                                                                   Gorevic P.D.,
                                                                                                                                                                                                                                                                                               SEQUENCE OF 19-99.
MEDLINE-77142518; PubMed-845435;
                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=87247238; PubMed=3109944; Ericsson L.H., Eriksen N., Walsh
  This SWISS-PROT entry is copyright. It is produced through a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 19-124.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=8839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59 NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                    revic P.D., Greenwald M., Frangione B., Pras M., Franklin ne amino acid sequence of duck amyloid A (AA) protein."; Immunol. 118:1113-1118(1977).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
                                        EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES OF THE SAA PROTEIN THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTECLYSIS. THEY DISRUPT TISSUE STRUCTURE AND COMPROMISE FUNCTION. SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                      TISSUE SPECIFICITY: PLASMA, SYNTHESIZED BY THE LIVER. ALSO PRESENT IN THE LIVER AND LUNG IRRESPECTIVE OF IN INDUCTION: UPON CYTOKINE STIMULATION.

THE PROTEIN IS THE PRECURSOR OF AMYLOID PROTEIN IS FORMED BY THE REMOVAL OF APPROXIMATELY 3 RESIDUES
                                                                                                 B ALLELE IS SHOWN HERE DISEASE: REACTIVE, SECO
                                                                                                                                                                                                                                          FUNCTION: MAJOR ACUTE PHASE REACTANT. APOLIPOPROTEIN
                                                                                                                            CARBOXYL END. POLYMORPHISM: AT LEAST TWO ALLELES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S09977;
S09978;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S09973;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S0997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           $09976.
$09977.
$09978.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A29419.
S09972.
S09973.
S09974.
S09975.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Aves; Neognathae; Anseriformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SAA1
 Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata; Craniata; Vertebrata; Euteleostomi;
Neognathae; Anseriformes; Anatidae; Anas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                  SECONDARY AMYLOIDOSIS IS CHARACTERIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                            EXIST. THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 122,
                                                                                                                           SEQUENCE OF
                                                                                                                                                                     PROTEIN AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
 the
                                                                                                                                                                                                INDUCTION
                                                                                                                                                         FROM
                                                                                                                                                                                                                                          Q
EMBL outstation
                                                                                                                                                                                                                                                                                 E.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                            THE
                                                                                                                                                         THE
                                                                                                  BY THE
                                                                                                                                                                     WHICH
                                                                                                                                                                                                                                          HDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                   in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
```

```
RESULT 22
SAA_MACEU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                   SAA_MACEU P53613;
                                  modified
entities
                                                                                                                                                                                                                                                                                                                                           01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VARIANT
VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; A03200; YLDKA.
PIR; A27227; A27227.
PIR; A32538; A32538.
InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_Droteins; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                    Serum amyloid A protein precursor Macropus eugenii (Tammar wallaby).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U59909; AAC60058.1;
EMBL; U59908; AAC60057.1;
EMBL; U64985; AAC60059.1;
                      or send an email to license@isb-sib.ch).
                                                                                                                                                                               Scand. J.
                                                                                                                                                                                        evolutionary analysis.
                                                                                                                                                                                                                 Uhlar C.M., Black I.L.,
Whitehead A.S.;
                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                  Mammalia;
                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acute phase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProDom; PD002112; Se:
SMART; SM00197; SAA;
                                                                                                                                             -
                                                                                                                                                                                                                                        MEDLINE=96179383;
                                                                                                                                                                                                                                                                                     NCBI_TaxID=9315;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00992; SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PR00306; SERUMAMYLOID
                                                                                                                                                                                                      'Wallaby serum amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                           63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NYDA 4
                                                                                                                                          COMPLEX.
TISSUE SPECIFICITY:
                                                                                                                    SIMILARITY).
SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                  FUNCTION: MAJOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                           NYDA 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                 non-profit institutions as long as its content and this statement is not removed. Usage by an requires a license agreement (See http://www.isb-
                                                                                                                                                                                                                                                                                                 Metatheria; Diprotodontia; Macropodidae;
                                                                                                                                                                                 Immunol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
89
107
81
93
93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; llarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plasma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAC60058.1; -.
AAC60057.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ΑA;
                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                           PubMed=8602460;
I.L., Shields D.C., Brack C.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Serum_amyloid_A;
                                                                                                                                                                43:271-276(1996).
R ACUTE PHASE REACTANT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18
127
89
107
107
93
93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13873 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HDL;
                                                                                                                                                                                                    A protein: cDNA
                                                                                                                                           PLASMA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Amyloid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SD -> AN (IN REF. 3)
MISSING (IN REF. 3).
T -> R (IN REF. 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SERUM AMYLOID A PROTEIN.
G -> S (IN ALLELE A).
A -> V (IN ALLELE A).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 23; DB
Pred. No. 62;
); Mismatches
                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -> R (IN REF. 3).
6F61476AEAB9EB6F CRC64;
                                                                                                                                           SYNTHESIZED
                                                                                                                                                                                                                                                                                                                                     (SAA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Signal.
                                                                                                                                                                                                                                                                                                                                                                                              127
                                 (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                      cloning,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62;
                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                   APOLIPOPROTEIN
                                                                                                                                           ΒY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                           THE LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 127;
                                                                                                                                                                                                                             Schreiber G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                 Macropus
                                                                                                                                                                                                                                                                                                              Euteleostomi;
                                               and
                                                                                                                                             (BY
                                                                                                                                                                    OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                commercia
                                                           50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

EMBL; U39363; AAB02187.1;

```
RESULT 24
SAA1_MUSVI
ID SAA1_M
AC P18575
DT 01-NOV
DT 01-NOV
DT 01-JUN
                                                                                                                  밁
                                                                                                                                        õ
                                                                                                                                                                                                                 RESULT 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DR DR DR DR DR DR DR DR SQ
                                                                                                                                                                         Query Match
Best Local S
                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequ
01-JUN-1994 (Rel. 29, Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CYCP_RHOSP STAN

P00146;

21-JUL-1986 (Rel. (

21-JUL-1986 (Rel. (

01-MAR-1989 (Rel. 1

Cytochrome c'.
                                                                                                                                                                                                           Electron transport; Heme. HI BINDING 117 117 HI BINDING 120 120 HI METAL 121 121 I SEQUENCE 128 AA; 13371 MW;
                                       SAA1_MUSVI
P18575;
                                                                                                                                                                                                                                                                      PRINTS; PR00608; CYTCHROMECII.
PRODOM; PD003828; Cyt_CII; 1.
PROSITE; PS00190; CYTCCHROME_C; 1.
                                                                                                                                                                                                                                                                                                       "Amino acid sequences of bacterial cytochromes c' and c-556.";

Proc. Natl. Acad. Sci. U.S.A. 78:6854-6857(1981).
-i- FUNCTION: CYTOCHROME C' IS THE MOST WIDELY OCCURRING BACTERIAL C-TYPE CYTOCHROME. CYTOCHROMES C' ARE HIGH-SPIN PROTEINS AND THEME HAS NO SIXTH LIGAND. THEIR EXACT FUNCTION IS NOT KNOWN.
HEME HAS NO SIXTH LIGAND. THEIR EXACT FUNCTION IS NOT KNOWN.
HEME HAS NO SIXTH LIGAND. THEIR EXACT FUNCTION IS NOT KNOWN.
HSSP; POOL147; 1CPO.
InterPro; IPRO0345; Cyto_heme_bind.
InterPro; IPRO03231; Cyto_heme_bind.
InterPro; IPRO0331; Cyto_heme_bind.
Prints: PRO1322; Cytochrome.C_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rhodopseudomonas sp.
Bacteria; Proteobacteria; alpha subdivision; Rhizobiaceae group; Bradyrhizobium group; Rhodopseudomonas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProDom; PD002112; Serum_amyloid_A; SMART; SM00197; SAA; 1.
PROSITE; PS00992; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Meyer T.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ambler R.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=82082545;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-TJ12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=1078;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Acute phase; Plasma; HDL; Signal SIGNAL 1 18 POT CHAIN 19 127 SER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00306; SERUMAMYLOID ProDom; PD002112; Serum_amylo:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR000096; Serum_amyloid_A.
                                                                                                                 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63 NYDA 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                      1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                                                                                             ||||
| NYDA 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PF00277;
                                                                                                                                                               Similarity
4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1
19
127 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                     van Beeumen
                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                              2545; PubMed=6273892;
Bartsch R.G., Daniel M.,
                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SAA_proteins;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01, Created)
01, Last sequence update)
10, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14322 MW;
                                                                                                                                                                        100.0%;
Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                     ٠
;
                                                                                                                                                              0;
                                                                                                                                                                                                                      HEME
HEME
IRON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SERUM AMYLOID A PROTEIN. D2405776418F48FB CRC64
                                                                                                                                                                        Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 23;
Pred. No.
                                                                                                                                                                                                            EME (COVALENT).
RON (HEME AXIAL LIGAND).
F49957285708124F CRC64;
                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                (COVALENT).
                                                129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    128
                                                                                                                                                                                                                                                                                                                                                                                                                                               Kamen
                                                                                                                                                                         63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62;
                                                                                                                                                                                   DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                             M.D.,
                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                   Length 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRC64
                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                             McLellan L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                  THE
                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
RESULT 25
SAA2_MUSVI
                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                           SAA2_MUSVI STANDARD; PRT; 29 AA. p02739; PCT; 21-JUL-1986 (Rel. 01, Created) 01-NOV-1990 (Rel. 16, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) Serum amyloid A-2 protein precursor [Contains: Amyloid fibril protein AA)].
                                                                                                                                                                                                                                                                                                                                                                   CHAIN
MOD_RES
                         Mustela.
                                  Mammalia;
                                                 Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00306; SERUMAMYLOID. ProDom; PD002112; Serum_amyloi SMART; SM00197; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement (See http://www.isb-slb.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collable between the Swiss Institute of Bioinformatics and the EMBL outset the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for commodified and this statement is not removed.
        NCBI_TaxID=9667;
                                                             Mustela vison (American mink).
                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; M34953; AAA30968.1; -.
PIR; A36451; A36451.
InterPro; IPR000096; Serum_amyloid_
Pfam; PF00277; SAA_proteins; 1.
                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mustela vison (American mink).
Mustela vison (American mink).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora, Fissipedia; Mustelidae; Mustelinae
                                                                                                                                                                                                                                                                                                                                                                                                           Acute phase; Plasma;
                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS00992; SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 II INDOCTION: UPON CYTOKINE STIMULATION.

I DISEASE: REACTIVE, SECONDARY AMYLOIDOSIS IS CHARACTERIZED BY THE EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES OF THE SAA PROTEIN, THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTEOLYSIS;

THEY DISRUPT TISSUE STRUCTURE AND COMPONISE FUNCTION.

I MISCELLANEOUS: SAA2 IS MORE MAYLOIDOSENION SAA1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Marhaug G., Husby G., Dowton S.B.;
"Mink serum amyloid A protein. Expression on cDNA sequences.",
J. Biol. Chem. 265:10049-10054(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Serum amyloid A-1 protein precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-90277614;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM
                                                                                                                                                                                                                                            58 NYDA 61
                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE SPECIFICITY: PLASMA, INDUCTION: UPON CYTOKINE ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: MAJOR ACUTE PHASE REACTANT. APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPLEX.
                                                                                                                                                                                                                                                                                                 4;
                                                                                                                                                                                                                                                                                                              Similarity
                                     Eutheria;
                                                Metazoa;
                                                                                                                                                                                                                                                                                                                                                     129 AA;
                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                    19
19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N.A.
                                                                                                                                                                                                                                                                                                                                                             A;
;; HDL; /
18
129
129
                                                                                                                                                                                                                                                                                                                                                                                                                                                Serum_amyloid_A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=2351648;
                                     Carnivora;
                                                 Chordata;
                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                      14389 MW;
                                                                                                                                                                                                                                                                                                                                                                                                        Amyloid;
                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                  SERUM AMYLOID A-1 PROTEIN PYRROLIDONE CARBOXYLIC ACI; D73D3DD95519E068 CRC64;
                                                                                                                                                                                                                                                                                                             Score 23;
Pred. No.
                                                Craniata;
                                   Fissipedia;
                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SYNTHESIZED
                                                                                                                                                                                                                                                                                                                                                                                                    Signal; Multigene family.
                                  Vertebrata; Eu
ia; Mustelidae;
                                                                                                                                                                                                                                                                                                                         DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and primary structure based
                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BY THE LIVER
                                                                                                                                                                                                                                                                                                0;
                                                                                                     Amyloid
                                                                                                                                                                                                                                                                                                                        Length 129;
                                                                                                                                                                                                                                                                                                Indels
                                               Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                ACID.
                                   Mustelinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OF.
                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             outstation
                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  way
                                                                                                                                                                                                                                                                                              0;
```

```
밁
                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                   SOFTTTTTWEETHORRERE
                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                   Matches
                                                                                                                                                CANFA
                                       SAA_CANFA STANDARD; PRT; 129 AA. P19708; O1-FEB-1991 (Rel. 17, Created) O1-JUN-1994 (Rel. 29, Last sequence update) 16-CCT-2001 (Rel. 40, Last annotation update) Serum amyloid A protein precursor (SAA) [Cont. (Amyloid fibril protein AA)]. Canis familiaris (Dog).
                                                                                                                                                                                                                                                                                                               MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    on cDNA
J. Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Marhaug G., Husby G., Dowton S.B.;
"Mink serum amyloid A protein. Expression on cDNA sequences.";
J. Biol "Ab-"
                                                                                                                                                                                                                                                                                                                                      CHAIN
CHAIN
                                                                                                                                                                                                                                                                                                                                                               Acute F
                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; A03199; YLMNA.
PIR; B36451; B36451.
InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_proteins; 1.
PRINTS; PR00306; SERUMAMYLOID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   endotoxin-induced amyloidosis of the mink.";
Eur. J. Biochem. 104:407-412(1980).
          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalla; Eutheria; Carnivora; Fissipedia; Canidae; NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00992;
                                                                                                                                                                                                                                                                                                                                                                                                   ProDom; PD002112; Serum_amyloid_A;
SMART; SM00197; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; M34954; AAA30969.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Waalen K., Sletten K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-80156813;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 19-82.
                                                                                                                                                                                                 88
                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        European Bioinformatics Institute. The by non-profit institutions as long ifled and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MISCELLANEOUS: SAA2 IS MORE AMYLOIDOGE SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES OF THE SETHESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO FETHESE DISPOSITS TISSUE STRUCTURE AND COMPROMISE FUNCTION.
MISCELLANEOUS: SAA2 IS MORE AMYLOIDOGENIC THAN SAA1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INDUCTION: UPON CYTOKINE STIMULATION.
DISEASE: REACTIVE, SECONDARY AMYLOIDOSIS IS
EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE SPECIFICITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FUNCTION: MAJOR ACUTE PHASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INE=80156813; PubMed=6767608; en K., Sletten K., Husby G., I primary structure of amyloid
                                                                                                                                                                                                 NYDA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SWISS-PROT entry is copyright. It is produced through a collable the Swiss Institute of Bioinformatics and the EMBL outst European Bioinformatics Institute. There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                           pnase;
                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                               19
19
19
19
24
129
                                                                                                                                                                                                                                                                            3; Plasma; 1.
1 18
1 19
19 129
19 82
19 19
19 19
14 24
AA; 14456 MW;
                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 265:10049-10054(1990)
                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLASMA,
                                                                                                                                                                                                                                                                                                                                                                         Amyloid; Signal; Multigene family.
                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                             PYRROLIDONE CARBOXYLIC I -> F.
                                                                                                                                                                                                                                                            Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                      SERUM AMYLOID A-2 PROTEIN.
AMYLOID PROTEIN A.
                                                                                                                                                                                                                                                                                                  B79402006B34B882 CRC64;
                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SYNTHESIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REACTANT. APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nordstoga
d fibril p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (See http://www.isb-sib.ch/announce/
                                                                        [Contains:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Χ.
                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ВY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Usage
                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          primary structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THE
                                                                                                                                                                                                                                                                         Length 129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHARACTERIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
                                                                        Amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LIVER
                                                                                                                                                                                                                                                                                                                         ACID
                        Canis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SAA PROTEIN PROTEOLYSIS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a collaboration -
MBL outstation -
                                                                       protein
                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             outstation
                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           based
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         n no way
                                                                                                                                                                                                                                                0;
```

RESULT 27
SAA4_HUMAN
ID SAA4_H
AC P35542
DT 01-JUN
DT 01-JUN

STANDARD;

130

Ą

SAA4_HUMAN P35542; 01-JUN-1994 01-JUN-1994

(Rel.

29, 29,

sequence

```
В
                     γ
                                           Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
MEDLINE=91139635; PubMed=1995613;
Sellar G.C., Debeer M.C., Lelias J.M., Snyder Selburg P.J., Whitehead A.S.;
"Dog serum amyloid A protein. Identification defined by CDNA and protein analyses.";
J. Biol. Chem. 266:3505-3510(1991).
                                                                                                     CHAIN
PROPEP
MOD_RES
VARIANT
VARIANT
VARIANT
                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kluve-Beckerman B., Dwulet F.E., Dibartola Primary structures of dog and cat amyloid human AA.";
Comp. Blochem. Physiol. 94B:175-183(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               J. Biol.
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                         This
                                                                                                                                                                                                                               ProDom; PD002112;
SMART; SM00197; SA
                                                                                                                                                                                                                                                  Pfam; PF00277; SAA_proteins; I
PRINTS; PR00306; SERUMAMYLOID.
                                                                                                                                                                                                                                                                                                                                                                                          modified and this statement
                                                                                                                                                                                                                                                                                                                                                                                                               between the Swiss Institute of Bioinf
the European Bioinformatics Institute
                                                                                         SEQUENCE
                                                                                                                                                                                                        Acute phase;
                                                                                                                                                                                                                    PROSITE; PS00992; SAA;
                                                                                                                                                                                                                                                                            InterPro; IPR000096; Serum_amyloid_A.
                                                                                                                                                                                                                                                                                                                                                                    or send
                                                                                                                                                                                                                                                                                                                                                                                 entities requires a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=90091422;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 19-111.
58
                     1 NYDA 4
                                                                                                                                                                                                                                                                                    L; M59171; AAA62762.1;
LL; M59172; AAA62763.1;
LL; M59173; AAA62764.1;
LL; M59174; AAA62765.1;
LL; M59175; AAA51457.1;
L; JL0110; YLDGA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             THEY DISRUPT TISSUE STRUCTURE AND COMPROMISE SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FORMED BY THE REMOVAL OF RESIDUES FROM THE CARBOXYL END.
DISEASE: REACTIVE, SECONDARY AMYLOIDOSIS IS CHARACTERIZED BY THE
EXTRACELLULAR ACCUMULATION IN VARIOUS TISSUES OF THE SAA PROTEIN.
THESE DEPOSITS ARE HIGHLY INSOLUBLE AND RESISTANT TO PROTEOLYSIS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INDUCTION: UPON CYTOKINE STIMULATION.
PTM: THIS PROTEIN IS THE PRECURSOR OF AMYLOID PROTEIFORMED BY THE REMOVAL OF RESIDUES FROM THE CARBOXYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPLEX.
                                                                                                                                                                                                                                                                                                                                                                                                                           SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EN
NYDA 61
                                                                                                                                                                                                                                                                                                                                                                    an email to license@isb-sib.ch).
                                                        Similarity
                                            4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SPECIFICITY: PLASMA,
                                                                                        1
19
19
112
19
25
25
35
88
129
                                             Conservative
                                                                                                                                                                                                         Plasma;
                                                                                         A.
                                                                                                                                                                                                                               SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=2598632;
., Dwulet F.E., Di
es of dog and cat
                                                                                      18
129
111
129
19
25
25
35
36
                                                                                                                                                                                                                                         Serum_amyloid_A;
                                                                                                                                                                                                                                                                                                                                                                             license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                          institutions as long atement is not removed.
                                                     100.0%;
                                                                                                                                                                                                        HDL;
                                                                                          MW.
                                                                                                                                                                                                       Amyloid; Multigene family;
                                                                                                          AMYLOID A PROTEIN.

AMYLOID PROTEIN A.

OFTEN CLEAVED DURING AMYLOIDOGENESIS.

PYRROLIDONE CARBOXYLIC ACID.

S -> G.
W -> L.
                                            0;
                                                                                        W -> L.
LLR -> RLK.
91B21ACBA1F998C9
                                                      Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SYNTHESIZED
                                            red. No. 63;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                       There are no restrictions ong as its content is in oved. Usage by and for conventions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Snyder
                                                                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D &
                                                                  1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BY THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proteins: comparison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P.W.,
                                             0,
                                                                                         CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               multiple isoforms
                                                                Length 129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FUNCTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Benson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LIVER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Glickman L.T.,
                                                                                                                                                                                                        Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           M.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OF.
                                                                                                                                                                                                                                                                                                                                                                                                                                        ø
                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                       collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WHICH
                                                                                                                                                                                                                                                                                                                                                                                                                             outstation
                                                                                                                                                                                                                                                                                                                                                                                            commercia.
                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ៥
                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                      50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SI
                                                                                                                                                                                                                                                                                                                                                                                                                 its
                                            0
```

```
EMBL; S48983; AAB24060.1; JOINED.
EMBL; S48980; AAB24060.1; JOINED.
EMBL; S48981; AAB24060.1; JOINED.
EMBL; L05920; -; NOT_ANNOTATED_CDS
EMBL; M81349; AAA60298.1; -.
PIR; A42258; A42258.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=93000022,
WatSon G., Coade S., Woo P.;
WatSon G., Coade S., Woo P.;
Analysis of the genomic and derived
"Analysis of the gene, SAA4.";
human serum amyloid A gene, SAA4.";
rmmunol. 36:703-712(1992).
                                                        Pfam; PF00277; SAA_proteins; I
PRINTS; PR00306; SERUMAMYLOID,
ProDom; PD002112; Serum_amyloi
                                                                                        InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_proteins; 1.
        Acute phase;
                          PROSITE; PS00992;
                                                                                                                              MIM; 104752;
                                                                                                                                                Genew;
                                                                                                                                                                                                                                                                                entities requires a license agreement (So or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El
                                                                                                                                                                                                                                                                                                                 use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chromatography/electrospray ionization tandem mass spectrometry."; Electrophoresis 17:866-876(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ducret A., Bruun C.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PARTIAL SEQUENCE. MEDLINE=96377164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=93300520; PubMed Steel D.M., Sellar G.C., Whitehead A.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Characterization of human serum amyloid A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  closely linked to,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  superfamily as lipoprotein.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=92156125; PubMed=1740433; Whitehead A.S., Debeer M.C., Stee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "A constitutively expressed serum amyloid A protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lane W.S., Debeer F.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'Identification of novel members of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          two-dimensional electrophoresis
                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION: MAJOR
                                                                                                                                                                                                                                                                                                                                                       European
                                                                                                                                                                                                                                                                                                                                                                                                                                          INDUCTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OR CSAA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                serum amyloid A protein gene (SAA2)."; ics 16:447-454(1993).
                                          SM00197; SAA; 1.
                                                                                                                                            HGNC:10516; SAA4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SPECIFICITY:
       Plasma;
                                                                                                                                                                                                                                                                                                                                                   Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                     CIFICITY: PLASMA, SYNTHES CONSTITUTIVELY EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  constitutive apolipoproteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  267:3862-3867(1992)
                       SAA;
                                                        Serum_amyloid_A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PubMed=8783012;
C.F., Bures E.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=7686132;
r G.C., Uhlar C.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein precursor (Constitutively expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACUTE
       HDL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              shares structural similarities
     Signal; Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PHASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Steel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Catarrhini; Hominidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SYNTHESIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REACTANT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Marhaug G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          by liquid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein structure of a novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Simon
                                                                                                                                                                                                                                                                                            oved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                              There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  serum amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rits M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              s.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
family; Glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of high
                                                                                                                                                                                                                                                                                                                                                                                                                                                     THE LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Husby
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Debeer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lelias
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     isoforms separated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  density
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
                                                                                                                                                                                                                                                                                                                                                restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              with,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ဝူ
                                                                                                                                                                                                                                                                                                                                                                   EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (SAA4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J.M.,
                                                                                                                                                                                                                                                                                                                                                                                a collaboration
                                                                                                                                                                                                                                                                                                         for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              an acute-
                                                                                                                                                                                                                                                                                                                                                                 outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     serum
                                                                                                                                                                                                                                                                                                                                                on
```

TWO SONS THE PROPERTY OF SONS

```
RESULT 28
COAC_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                    "5-Lipoxygenase interacts with coactosin-like protein.";
J. Biol. Chem. 276:16520-16527(2001).
-i- FUNCTION: Binds to F-actin in a calcium-independent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHAIN
CARBOHYD
SEQUENCE
                                                                                                                                                                   Provost P., Radmark O.;
                                                                                                                                                                                                                                                                                                                   TISSUE=Kidney, Lung, Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                       mechanism for a common contiguous Nat. Genet. 17:154-163(1997).
                                                                                                                                                                                                                                                                                                                                                                        Chen K.-S., Manian P., Koeuth Lee C.-C., Lupski J.R.;
"Homologous recombination of a
                                                                                                                                                                                                                                    role of
                                                                                                                                                                                                                                          "Coactosin-like protein,
                                                                                                                                                                                                                                                      Radmark O.;
                                                                                                                                                                                                                                                               Provost
                                                                                                                                                                                                                                                                        PubMed=11583571;
                                                                                                                                                                                                                                                                                        FUNCTION,
                                                                                                                                                                                                                                                                                                            Submitted
                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q14019;
                                                                                                                                                                                                                                                                                  LYS-75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coactosin-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
                                                                                                                                                                                                      INTERACTION WITH 5-LIPOXYGENASE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=9326934;
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59 NYDA
                                                                                                TISSUE SPECIFICITY: Widely expressed with highest
                                                                                                                    SUBUNIT: Interacts with
                                                              SIMILARITY: BELONGS COACTOSIN SUBFAMILY.
                                                                               placenta, lung, kidney and levels in brain, liver and
                                                                                                                             FUNCTION: Binds to F-actin in a calcium direct effect on actin depolymerization
                                                                                                           independent manner.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NYDA 4
                                                                                                                                                                                                                       lysine-75.";
.. J. 359:255-263(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                         SUBCELLULAR
                                                                                                                                                                                                                                                                                                          (JUL-2001) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
94
130 AA;
                                                                                                                                                                            Doucet J.,
                                                                                                                                                                                                                                                             Doucet J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130
94
14807
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Primates;
                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
                                                                                                                                                                                                                                                                                        LOCATION,
                                                                                                                                                                           Hammarberg
                                                                                                                                                                                                                                                            Stock A.,
                                                                        TO
                                                                                                                                                                                                                                                                                                        the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                          a human
                                                                                                                                                                                                                                                                                                                             Uterus;
                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΜW;
                                                                                                                    5-lipoxygenase (5LO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SERUM AMY
                                                                                                                                                                                                                                                                                                                                                                                         T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                       pancreas.
ACTIN-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                         peripheral blood
                                                                                                                                                                                                                                                                                                                                                                          flanking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OF86E9F91EF00B1C CRC64;
                                                                                                                                                                                                                                                                                        TISSUE
                                                                                                                                                                                                      AND MUTAGENESIS
                                                                                                                                                                                                                                        F-actin-binding
                                                                                                                                                                                                                                                             Gerisch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                          <u> 13</u>
                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                          Potocki L.,
                                                                                                                                     calcium-independent manner.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AMYLOID A-4 PROTEIN (ED (GLCNAC. . .) (P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                          Gerisch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             update)
                                                                                                                                                                                                                                                                                       SPECIFICITY,
                                                                                                                                                                                                                                                                                                                                                                deletion
                                                                                                                                                                                                                                                            G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DΒ
                                                                       PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                            Samuelsson
                                                                                                                                                                          G.,
                                                                                                                                                                                                                                                                                                                                                                                           Zhao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                        leukocytes and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 130;
                                                                                                                                                                                                                                                                                                                                                                syndrome
                                                                                                                    in a
                                                                                                                                                                                                      OF.
                                                                                                                                                                                                                                         protein:
                                                                                                                                                                           Samuelsson
                                                                                                                                                                                                                                                                                                                                                                                           Ö.
                                                                                                                                                                                                                                                                                       AND MUTAGENESIS
                                                                                                                                                                                                                                                                                                                                                                          cluster
                                                                                                                                                                                                      LYS-130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (PARTIAL)
                                                                       ADF
                                                                                                  levels
                                                                                                                    calcium-
                                                                                                                                                                                                                                                                                                                                                                                           Chinault A.C
                                                                                                                                                                                                                                                           Ħ
                                                                     FAMILY
                                                                                                                                                                                                                                          critical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                           8
                                                                                         lower
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                       no
                                                                                                                                                                                                                                                                                       얽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

the entities This SWISS-PROT entry is between the Swiss Instit ween the Swiss Institute of Bioinformatics and ween the Swiss Institute of Bioinformatics are no restrict European Bioinformatics Institute. There are no restrict by non-profit institutions as long as its content is by non-profit institutions as long as its content is by non-profit institutions as long as its content is by non-profit institutions as long as its content is lifted and this statement is not removed. Usage by and foliations are alicense agreement (See http://www.isb-sib. restrictions on s in no way for commercial p.ch/announce/ collaboration outstation

```
RESULT COOK ACCOMENT OF THE PROPERTY OF THE PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RA Kawai J. Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Salto T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Salto T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Washio T.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Washio T.,
RA Schriml L.M., Staubli F., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Blake J., Boitonga N., Carninci P., de Bonaldo M.F.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Hayashizaki Y.;
RT., Natura 409.687.690/72001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _MOUSE
COAC_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; L54057; AAA88022.1; -. EMBL; BC010039; AAH10039.1; -. EMBL; BC010884; AAH10884.1; -. EMBL; BC016702; AAH16702.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=C57BL/6J; TISSUE=Pancreas, : MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9CQI6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MUTAGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MUTAGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MUTAGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cytoskeleton;
                                                    SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MUTAGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MUTAGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            136 NYDA 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pro; IPR002108; Actbind_cofln
PF00241; cofilin_ADF; 1.
                                                                                                   409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SM00102; ADF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     an
  (JUL-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               s (Mouse).
Metazoa; Chordata; C
Metazoa; Rodentia; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   email
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Actin-binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15945
ť
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
  the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTIVITY K->R: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTIVITY.
K->E: ABOLISHES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A4B881DD8E89A35D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Small intestine,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABOLISHES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NO EFFECT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABOLISHES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EFFECT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Length 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5LO-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5LO-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTIN-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5LO-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5LO-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and Tongue;
                                                                                                                                                                                                                            Storch K.-F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                      H 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
RESULT 30
RIB1_PHOLE
      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AK010052; BAB26668.1; -. EMBL; AK007994; BAB25396.1; -. EMBL; AK0008085; BAB25450.1; -. EMBL; BC011068; AAH11068.1; -. EMBL; BC010249; AAH10249.1; -. MGD; MGI:1919292; Clp.
The C.Y., Meighen E.A.;

"The lux genes in Photobacterium leiognathi are closely linked with genes corresponding in sequence to riboflavin synthesis genes.";

Biochem. Biophys. Res. Commun. 186:690-697(1992).

-1- FUNCTION: Riboflavin synthase is a bifunctional enzyme complex catalyzing the formation of riboflavin from 5-amino-6-(1'-D)-ribityl-amino-2,4(1H,3H)-pyrimidinedione and L-3,4-dihydrohy-2-butanone-4-phosphate via 6,7-dimethyl-8-lumazine. The beta suburcatalyzes the condensation of 5-amino-6-(1'-D)-ribityl-amino-2,4(1H,3H)-pyrimidinedione with L-3,4-dihydrohy-2-butanone-4-phosphate yielding 6,7-dimethyl-8-lumazine.

-1- CATALYTIC ACTIVITY: 2 6,7-dimethyl-8-(1-D-ribityl)lumazine.
                                                                                                                                                                                                                                                                                                                    01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat
6,7-dimethyl-8-ribityllumazine synthase (EC
(Lumazine synthase) (Riboflavin synthase be
                                                                                                                                                                     STRAIN-ATCC 25521;
MEDLINE=92360014;
Lee C.Y., Meighen
                                                                                                                                                                                                                                                                                                                                                                                                    001994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00241; cofilin_ADF; 1
SMART; SM00102; ADF; 1.
Cytoskeletton; Actin-binding.
SEQUENCE 142 AA; 15944 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Biochem. Biophys. Res. Commun.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     coactosin-like protein."
                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                NCBI_TaxID=658;
                                                                                                                                                                                                                                                                   Photobacterium
                                                                                                                                                                                                                                                                               Bacteria;
                                                                                                                                                                                                                                                                                            Photobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                   RIB1_PHOLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Molecular cloning and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PubMed=11785969;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              136 NYDA 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ween the Swiss Institute of Bioinf
European Bioinformatics Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       direct effect on actin depolymerization. SUBUNIT: Interacts with 5-lipoxygenase (510) in a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COACTOSIN SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           independent manner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity 4; Conserv
                                                                                                                                                                                                                                                                              Proteobacteria; gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR002108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INTERACTION WITH
                                                                                                                                                                                                                                                                                            leiognathi.
                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                      PubMed=1339274;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Actbind_cofln.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Samuelsson B., Radmark O.; functional characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TO THE ACTIN-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                         otation update)
synthase (EC 2.
n synthase beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      in a calcium-independent manner.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      290:783-789(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5-LIPOXYGENASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88CB1BF12447ABC8 CRC64;
                                                                                                                                                                                                                                                                               subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23;
                                                                                                                                                                                                                                                                                                                                                                                                                   144 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROTEINS
                                                                                                                                                                                                                                                                               Vibrionaceae;
                                                                                                                                                                                                                                                                                                                       .5.1.9) (DMRL synthase) chain) (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          calcium-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                               subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

```
RESULT

RISBLST

ID SILST

ID SILS

ID SILST

ID SILS

ID SILST

ID SILST

ID SILS

ID SILS

ID SILS

ID SILS

ID SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RISB_STAAM (
Q931N8; Q99TA1;
15-JUN-2002 (Rel
                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-Mu50 / ATCC 700699, and N315;

MEDLIKE-21311952; PubMed=11418146;

Kuroda M., Ohta T., Uchlyama I., Baba T., Yuzawa H., Kobayashi I.

Cui L., Oguchi A., Aoki K.-I., Nagai Y., Lian J.-Q., Ito T.,

Kanamori M., Matsumaru H., Maruyama A., Murakami H., Hosoyama A.,

Mizutani-Ui Y., Takahashi N.K., Sawano T., Inoue R.-I., Kaito C.,

Sekimizu K., Hirakawa H., Kuhara S., Goto S., Yabuzaki J.,

Sekimizu K., Hirakawa H., Kuhara S., Goto S., Yabuzaki J.,
                                                                                 "Genome and virulence determinants acquired MRSA.";
                                                                                                                                  Baba T., Takeuchi F., Kuroda M., Yuzawa
Nagai Y., Iwama N., Asano K., Naimi T.,
Yamamoto K., Hiramatsu K.;
                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                   Kanehisa M., Yamashita A., Oshima K., Furuya K., Yoshino C., Shiba Hattori M., Ogasawara N., Hayashi H., Hiramatsu K.; "Whole genome sequencing of meticillin-resistant Staphylococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Staphylococcus aureus Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Staphylococcus aureus (strain Mu50 / ATCC 700699), Staphylococcus aureus (strain N315), and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
6,7-dimethyl-8-ribityllumazine synthase (EC 2.5.1.9) (DMRL synthase)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Lumazine synthase) (Riboflavin synthase beta chain). RIBH OR SAV1767 OR SA1586 OR MW1708.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STAAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Riboflavin biosynthesis; Transferase.
NON_TER 144 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR002180; DMRL_synthase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a copyright the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=158878, 158879, 196620;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProDom; PD003664; DMRL_synthase; 1.
TIGREAMS; TIGR00114; ribH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIR; PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; M90094; AAA73230.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     71 NYDA 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NYDA 4
                             FUNCTION: Riboflavin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 riboflavin + 4-(1-D-ribitylamino)-5-amino-2,6-dihydroxypyrimidine.
PATHWAY: Riboflavin biosynthesis; last step.
SIMILARITY: BELONGS TO THE DMRL SYNTHASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PF00885; DMRL_synthase;
                                                         359:1819-1827(2002).
                                                                                                                                                                                                                                                                                                                357:1225-1240(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1110; PC1110.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              non-profit institutions as long as its content is in no way and this statement is not removed. Usage by and for commercial requires a license agreement (See http://www.lsb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              144 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
     flavin synthase is a bifunctional formation of riboflavin from 5-a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15180 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (strain MW2).
Bacillales; Staphylococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4A4E4820CD960359 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                         of
                                                                                                    high
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   154
                                                                                                                                                        H., Aok
Kuroda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
                                                                                                       virulence
                                                                                                                                                                                   Aoki K.-I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
                                                                                                                                                     н.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
5-amino-6-(1'-D)-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 144;
                                                                                                                                                                                                                                                                                                                                                           Staphylococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                          Cui
                                                                                                    community
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kobayashi I., Ito T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  restrictions
                                                                                                                                                                             Oguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                    Τ.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                      FMF5_ECOLI
P13719;
01-JAN-1990
                                                                                                                                       J. Bacteriol. 171:4281-4289(1989)
-i- FUNCTION: FIMBRIAE (ALSO CALL)
                                                                                                                                                                           MEDLINE-89327142; PubMed=2568985; Bilge S.S., Clausen C.R., Lau W., Moseley Molecular characterization of a fimbrial diffuse adherence of diarrhea-associated E
                                                                                                                                                                                                                                                                                                                                                01-JAN-1990
01-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---
                                                                                                                                                                   cells.";
                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                     NCBI_TaxID=562;
                                                                                                                                                                                                                                                                                    Escherichia
                                                                                                                                                                                                                                                                                               Bacteria;
                                                                                                                                                                                                                                                                                                         Escherichia
                                                                                                                                                                                                                                                                                                                                   F1845 fimbrial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00885; DMRL_synthase; 2. | ProDom; PD003664; DMRL_synthase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     use by non-profit institutions as long modified and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Riboflavin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TIGRFAMS; TIGRO0114; ribH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR002180; DMRL_synthase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                70 NYDA 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
tes 4; Conserv
      FUNCTION: FIMBLE (ALSO CALLED |PILI), POLAR FILAMENTS RADIATING FROM THE SURFACE OF THE BACTERIUM TO A LENGTH OF 0.5-1.5

FROM THE SURFACE OF THE BACTERIUM TO A LENGTH OF 0.5-1.5

MICROMETERS AND NUMBERING 100-300 PER CELL, ENABLE BACTERIA TO COLONIZE THE EPITHELIUM OF SPECIFIC HOST ORGANS.

COLONIZE THE EPITHELIUM OF SPECIFIC HOST ORGANS.

SUBCELLULAR LOCATION: Fimbria.

DISBASE: HEMAGGLUTININS OF UNDATHOGENIC E.COLI MEDIATE ADHERENCE TO THE UPPER URINARY TRACT. THESE ADHESINS BIND TO THE DR BLOOD GROUP ANTICEN AND ALSO AGGLUTINATE HUMAN ERYTHROCYTES IN THE PRESENCE OF D-MANNOSE (MANNOSE-RESISTANT HEMAGGLUTINATION (MRHA)).

DISBASE: C1845 IS A STRAIN RESPONSIBLE FOR DIARRHEAL DISBASE.

SIMILARITY: BELONGS TO THE AFA-I/AFA-III/DRAA/DAAE FAMILY OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PATHWAY: Riboflavin biosynthesis; last step.
SIMILARITY: BELONGS TO THE DMRL SYNTHASE FAMILY.
CAUTION: Ref. 1 strain Mu50 sequence differs from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a frameshift in position 28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ribityl-amino-2,4(1H,3H)-pyrimidinedione and L-3,4-dihydrohy-2-butanone-4-phosphate via 6,7-dimethyl-8-lumazine. The beta subu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SWISS-PROT entry is copyright. It is produ
                                                                                                                                                                                                                                                                                            Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                biosynthesis; Transferase;
                                                                                                                                                                                                                                                                                                           coli
                                                                                                                                                                                                                                                                                                                                            (Rel. 13,
(Rel. 13,
(Rel. 35,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                   precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WW;
                                                                                                                                                                                                                                                                                            gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BC6AD39B6431BF44 CRC64;
                                                                                                                                                                                                                                                                                            subdivision; Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                (Fimbrial adhesin
                                                                                                                                                                                                                                                                                                                                                                                                 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               There are no restrictions ong as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is produced through
                                                                                                                                                                              Escherichia
                                                                                                                                                                                                                                                                                                                                                                                                 A
                                                                                                                                                                                       S.L.;
adhesin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Length 154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and the
                                                                                                                                                                                                                                                                                                                                  F1845
                                                                                                                                                                                         F1845,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        bу
                                                                                                                                                                             coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                that shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                               antigen).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL
                                                                                                                                                                             mediating
to HEp-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                due
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ţ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
```

```
RA Wood V., Gwilliam R., Rajandream M.A., Lyne M., Lyne R., Stewart A., RA Syouros J., Peat N., Hayles J., Baker S., Basham D., Bowman S., RA Brooks K., Brown D., Brown S., Chillingworth T., Churcher C.M., RA Brooks K., Brown D., Brown S., Chillingworth T., Churcher C.M., RA Gonles S., Goble A., Hamlin N., Harris D., Hidalgo J., Hodgson G., RA Holroyd S., Hornsby T., Howarth S., Huckle E.J., Hunt S., Jagels K., RA James K., Jones L., Jones M., Leather S., McDonald S., McDean J., RA James K., Jones L., Jones M., Leather S., McDonald S., McLean J., RA James K., O'Neil S., Pearson D., Quail M.A., Rabbinowitsch E., RA Goliver K., O'Neil S., Pearson D., Quail M.A., Rabbinowitsch E., RA Skelton J., Simmonds M., Squares R., Squares S., Stevens K., RA Taylor K., Taylor R.G., Tivey A., Walsh S.V., Warren T., Whitehead S., RA Woodward J., Volckaert G., Aert R., Robben J., Grymonprez B., RA Weltjens I., Vanstreels E., Rieger M., Schaefer M., Mueller-Auer S., Gabel C., Fuchs M., Fritzc C., Holzer E., Moestl D., Hilbert H., Ra Goffeau A., Cadieu E., Dreano S., Gloux S., Lelaure V., Mottier S., RA Galibert F., Aves S.J., Xiang Z., Hunt C., Moore K., Hurst S.M., RA Lucas M., Rochet M., Gaillardin C., Tallada V.A., Garzon A., Thode G., RA Galibert F., Aves S.J., Xiang Z., Hunt C., Moore K., Hurst S.M., RA Daga R.R., Cruzado L., Jinenez J., Sanchez M., Garzon A., Thode G., RA Daga R.R., Cruzado L., Jinenez J., Sanchez M., Garzon A., Thode G., RA Daga R.R., Cruzado L., Jinenez J., Sanchez M., Garzon A., Thode G., RA Daga R.R., Cruzado L., Jinenez J., Sanchez M., Garzon A., Thode G., RA Cerrutti L., Lowe T., McCombie W.R., Paulsen I., Potashkin J., Rha Shakovski G.V., Ussery D., Barrell B.G., Nurse P., Rha Shakovski G.V., Ussery D., Barrell B.G., Nurse P., Sanchez M., Sa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Probable ubiquitin-conjugating enzyme E2-17 kDa (EC 6.3.2.19) (Ubiquitin-protein ligase) (Ubiquitin carrier protein). UBC16 OR SPEC1198.09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UBCG_SCI
Q9P6I1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Schizosaccharomyces pombe (Fission yeast).
Eukaryota; Fungi; Ascomycota; Schizosaccharomycetes;
Schizosaccharomycetales; Schizosaccharomycetaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCHPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fimbria; Signal; Antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Schizosaccharomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIR; A33859; A33859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                        FUNCTION: CATALYZES THE COVALENT ATTACHMENT OF UBIQUITIN TO OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SCHPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NYDA 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        M27725; AAA23661.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1848401; PubMed=11859360;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 159 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
(BY SIMILARITY).

C ACTIVITY: ATP + ubiquitin + protein lysine - AMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 159 I
16722 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL.
F1845 FIMBRIAL PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABC240A2DB65C2ED CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 159;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

ş

밁

```
RESULT 34
TPX_STRPA
SOFT WERE RESERVED TO THE COLOR COLO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro: IPRO00508; UBQ_conjugat.

Pfam; PF00179; UQ_con; 1.

ProDom; PD000461; UBC_con; 1.

SMART; SM00212; UBCc; 1.

SMART; SM00212; UBCc; 1.

SMART; SM00212; UBC; 1.

SMART; SP00183; UBIQUITIN_CONUUGAT_1; FALSE_NEG.

PROSITE; PS00183; UBIQUITIN_CONUUGAT_2; 1.

UB1 CONUUGAT_2; Ligase; Multigene family.

UB1 Conjugation pathway; Ligase; Multigene family.

BINDING 90

UBIQUITIN (BY SIMILARITY)

SEOUENCE 160 AA; 17842 MW; D1A5CCC383CB832C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P31307,
01-JUL-1993 (Rel. 26, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Probable thiol peroxidase (EC 1.11.1.-).
                                                                                                                                                                                                            use by non-profit institutions as long a modified and this statement is not removed. entities requires a license agreement (See |
                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute. There are no restrictions on use by non-profit institutions as long as its content is in no modified and this statement is not removed. Usage by and for commen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Streptococcus sanguis FW213.";
Infect. Immun. 57:3527-3533(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TPX_STRPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <del>+</del> +
                                                                                                                                                                               or send
                                                                                                                                                                                                                                                                                                                                                                                                                     -1- FUNCTION: HAS ANTIOXIDANT ACTIVITY. COULD REMOVE PEROXIDES H(2)O(2) (BY SIMILARITY).
-1- SIMILARITY: BELONGS TO THE AHPC/TSA FAMILY. TPX SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-FW213;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AL355921; CAB91184.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          - I - SIMILARITY: BELONGS TO THE UBIQUITIN-CONJUGATING ENZYME FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Penno J.C., Leblanc D.J., Fives-Taylor P.;
Nucleotide sequence analysis of a type 1 fimbrial gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=90035427; PubMed=2572555;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diphosphate + protein N-ubiquityllysine.
PATHWAY: Ubiquitin conjugation; second step.
MISCELLANGUOG: A CYSTEINE RESIDUE IS REQUIRED FOR UBIQUITIN-
THIOLESTER FORMATION (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NYDA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P15731;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4;
                                                                                                                                                                               an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     parasanguis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lactobacillales; Streptococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     163
                                                                                                                                                                                                            (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 160;
                                                                                                                                                                                                                                         Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                               Уď
                                                                                                                                                                                                                                               and
                                                                                                                                                                                                                                               for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ဝ္ဘ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

InterPro; InterPro;

IPR000866; Ahpc IPR002065; TPX.

AhpC-TSA.

AhpC-TSA; 1.

EMBL; M26130;

AAA53078.1;

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                           EMBL; M95288; AAA27333.1;
EMBL; M61118; AAA27320.1;
PIR; A40007; A40007.
PIR; S31048; S31048.
HSSP; O36005; 1B8D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oxidoreductase;
INIT_MET 0
SEQUENCE 163 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-AUG-1992 (Rel. 23, Creacc, 01-AUG-1992 (Rel. 23, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) 7-phycoerythrin class II alpha chain.
                                                                                                                                                                                  modified and this statement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YANAS
                                                                                                                                                                                              the European Bioinformatics Institute. Thuse by non-profit institutions as long
                                                                                                                                                                       entities requires a license agreement
                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                                                                                                                                                                                                                              Ong L.J., Glazer A.N.;
"Phycoerythrins of marine unicellular cyanobacteria."
                                    InterPro; IPR001659; Phycobilisome.
Pfam; PF00502; Phycobilisome; 1.
ProDom; PD000340; Phycobilisome; 1.
                                                                                                                                                          or send
                                                                                                                                                                                                                                                                                                                                                                                           CHROMOPHORES, AND PARTIAL SEQUENCE. MEDLINE-91236720; PubMed-1903388;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=91236722; PubMed=1903390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         differing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              de Lorimier R., Wilbanks S.M., Glazer A.N.; "Genes of the R-phycocyanin II locus of marine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDLINE=93144698; PubMed=8425055;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bacteria; Cyanobacteria;
NCBI_TaxID=32052;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synechococcus sp. (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PHA2_SYNPY
                            Phycobilisome;
                                                                                                                                                                                                                                                                                                                                          phycoerythrins.
                                                                                                                                                                                                                                                                                                                                                      and locations and energy transfer pathways
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wilbanks S.M., de Lorimier R., Glazer "Phycoerythrins of marine unicellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plant Mol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                151 NYDA 154
                                                                                                                                                                                                                                                                                                                                                                                                                                  class II phycoerythrin."
. Biol. Chem. 266:9535-95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                               Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                          BIOL Chem. 266:9515-9527(1991).

BIOL CHEM. 266:9515-9527(1991).

FUNCTION: LICHT-HARVESTING PHOTOSYNTHETIC BILE PIGMENT-PROTEIN

FROM THE PHYCOBILIPROTEIN COMPLEX.

SUBGUIT: HETERODIMER OF AN ALDHA AND A BETA CHAIN.

SUBCELLULAR LOCATION: Periphery of the rods of the phycobilisome.

PTM: CONTAINS THREE COVALENTLY LINKED BILIN CHROMOPHORES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         comparison of protein-chromophore interactions fering in bilin composition."; nt Mol. Biol. 21:225-237(1993).
                                                                                                                                                          an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
    83
Electron transport; Photosynthesis; 5 75 PHYCOUROBILIN CHROMOPH 3 83 PHYCOERYTHROBILIN CHRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                  266:9535-9539(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peroxidase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chroococcales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MΨ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WH8020).
                                                                                                                                                                         is not removed. U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 23;
Pred. No.
  PHYCOUROBILIN CHROMOPHORE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E731B812D772CBAA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                165
                                                                                                                                                                                                                                                                                                                                                                                                                                                         A.N.;
cyanobacteria. III.
                                                                                                                                                                      (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                            There are no restrictions ong as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synechococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                       in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                  Usage
                                                                                                                                                                                                                                                                                                                                                      Synechococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synechococcus spp., ions in phycocyanins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                         Bile pigment.
                                                                                                                                                                                    bу
                                                                                                                                                                                                                                                                                                                                                                    Η.
                                                                                                                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                    Bilin
                                                                                                                                                                                                                       EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                           a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                     for
                                                                                                                                                                                                                                                                                                                                                                  types
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                     n no way
                                                                                                                                                                                                            its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
RESULT 36
OC OC BET DE AC
                                                                                                                WRBA_
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SQ
                                                                                                                            RESULT
                                                                                                                                                                                                         Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best
                                                                                                    WRBA_ECO57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P57880;
16-OCT-2001
16-OCT-2001
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BINDING
SEQUENCE
                              Q8X4B4; Q8X468; Q9KXH7;
15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence updat
15-JUN-2002 (Rel. 41, Last annotation upd
Flavoprotein wrbA (Trp repressor binding
WRBA OR Z1423/Z1504 OR ECS1159.1/ECS1251.
                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                       May B.J., Zhang Q., Li L.L., Paustian M.L., Whittam T.S., Kapu "Complete genomic sequence of Pasteurella multocida pm70."; Proc. Natl. Acad. Sci. U.S.A. 98:3460-3465(2001).
-i- FUNCTION: HAS ANTIOXIDANT ACTIVITY. COULD REMOVE PEROXIDE: H(2)O(2) (BY SIMILARITY).
-i- SIMILARITY: BELONGS TO THE AHPC/TSA FAMILY. TPX SUBFAMILY
         Bacteria;
                                                                                                                                                                                                                                                       SEQUENCE
                    Escherichia coli 0157:H7.
                                                                                                                                                                                                                                                                 Oxidoreductase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TPX OR PM0820.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TPX_PASMU
                                                                                                                                                                                                                                                                            PROSITE;
                                                                                                                                                                                                                                                                                                  InterPro; IPR000866; AhpC-TSA.
                                                                                                                                                                                                                                                                                                                         EMBL; AE006121; AAK02904.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=21145866; PubMed=11248100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=747;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pasteurella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bacteria; Proteobacteria; gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pasteurella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Probable thiol
                                                                                                                                                            157- NYDA 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                   1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NYDA 50
                                                                                                                                                                                                                                                                                          PF00578;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                           00578; AhpC-TSA; 1.
PS01265; TPX; 1.
         Proteobacteria; gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140
                                                                                                                                                                                                                                                       165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Rel. 40, Created)
(Rel. 40, Last sequence up)
(Rel. 40, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            multocida
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                       AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peroxidase (EC 1.11.11.-).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ΑA,
                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                   Peroxidase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140 I
17670 MW;
                                                                                                                                                                                                                                                       17706 MW;
                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                    Complete proteome.
W; 21A6EEBA9B9A11C7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PHYCOERYTHROBILIN CHROMOPHORE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred!
                                                                                                                                                                                                                     Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B17A9C0BA5D24602
         subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.
                                                                  update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23;
                                                                                                      197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         165
                                                       update)
                                                                                                                                                                                                                     83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                COULD REMOVE PEROXIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            83;
                                protein).
                                                                                                                                                                                                                                DB 1;
                                                                                                      A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
          Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pasteurellaceae;
                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                Length 165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kapur V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OR
R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
Ş
                                                                                                                                    밁
                                                                                  Query Match
Best Local
                                                                  Matches
                                                                                                                                                                                                                                   EMBL; AP000422; BAA94098.1; --
EMBL; AE005294; AAG55552.1; ALT_INIT.
EMBL; AE005300; AAG55621.1; ALT_TERM.
EMBL; AP002554; -; NOT_ANNOTATED_CDS.
                                                                                                                                                                                                                                                                                                                       entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outset the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for contenting the statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Perna N.T., Plunkett G. III, Burland V., Mau B., Glasner J.D., Rose D.J., Mayhew G.F., Evans P.S., Gregor J., Kirkpatrick H.A., Posfai G., Hackett J., Klink S., Boutin A., Shao Y., Miller L., Grotbeck E.J., Davis N.W., Lim A., Dimalanta E.T., Potamousis K., Apodaca J., Anantharaman T.S., Lin J., Yen G., Schwartz D.C., Welch R.A., Blattner F.R.;

Welch R.A., Blattner F.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genes
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Complete nucleotide sequence of the prophage VT2-Sakai carrying the verotoxin 2 genes of the enterchemorrhagic Escherichia coli O157:H7 derived from the Sakai outbreak "; Genes Genet. Syst. 74:227-239(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Makino K., Yokoyama K., Kubota Y., Yutsudo C.H.,
Kurokawa K., Ishii K., Hattori M., Tatsuno I., A
Yamamoto K., Ohnishi M., Hayashi T., Yasunaga T.
Sasakawa C., Shinagawa H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoyama Han C.-G., Ohtsubo E., Nakayama K., Murata T., Tanaka M., Tobe T., Iida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasunaga Kuhara S., Shiba T., Hattori M., Shinagawa H.; "Complete genome sequence of enterohemorrhagic Escherichia coli 0157:H7 and genomic comparison with a laboratory strain K-12."; DNA Res. 8:11-22(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-0157:H7 / EDL933 / ATCC 700927;
MEDLINE-21074935; PubMed-11206551;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A
STRAIN-0157:H7 / I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-0157:H7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-20198780; PubMed-10734605;
                                                                                                                                                                    Flavoprotein;
                                                                                                                                                                                                        Pfam; PF00258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN-0157:H7 / RIMD 0509952;
MEDLINE-21156231; pubMed-11258796;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nature 409:529-533(2001).
[3]
                                                                                                                                                                                     PROSITE; PS00201; FLAVODOXIN; FALSE_NEG.
                                                                                                                                                                                                                       InterPro; IPR001226; Flavodoxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=83334;
67
                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAUTION: WrbA is interrupted by the insertion of the prophage Sakai between positions 17 and 18\,.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    noncovalent complexes between the trp repressor operator-bearing DNA (By similarity) COFACTOR: Binds I FMN per monomer (By similarity SIMILARITY: BELONGS TO THE WRBA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: Seems to enhance the formation and/or
NYDA 70
                                                                Similarity
4; Conserv
                                                                                                                                    197
                                                                Conservative
                                                                                                                                                 FMN; Complete proteome.

0 0 BY SIMIL
                                                                                                                                    ₽,
                                                                                                                                                                                                        flavodoxin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RIMD 0509952;
                                                                                                                                    20703 MW;
                                                                                100.0%;
                                                                0,
                                                                              Score 23;
Pred. No.
                                                                                                                                    7117EF93D3B72447 CRC64;
                                                                                                                                                    SIMILARITY
                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (By similarity).
                                                                                1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T., Honda
                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Abe
                                                                                               Length 197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kimura S.,
be H., Iida
                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        stability of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                             EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yokoyama K.,
                                                                                                                                                                                                                                                                                                                                                                                                                               a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Τ.,
                                                                0
                                                                                                                                                                                                                                                                                                                                                               commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VT2-
                                                                                                                                                                                                                                                                                                                                                                                             on
                                                                                                                                                                                                                                                                                                                                                                               no
                                                                                                                                                                                                                                                                                                                                                                                             its
                                                              0;
```

RESULT

38

```
YCPZ_PSEA9
ID YCPZ_PSEA9
AC P29300;
DT 01-DEC-1992
DT 01-DEC-10-1992
DT 01-DEC-10-1992
DT 01-DEC-10-1992
DE SEQUENCE FROM SEQUENCE
TRA MEDLINE-922:
RA MEDLINE-923:
RA
              RESULT 39
Y363_LISMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
Glaser P., Frangeul L., Buchrieser C., Rusniok C., Amend A.,
Baquero F., Berche P., Bloecker H., Brandt P., Chakraborty T.,
Charbit A., Chetouani F., Couve E., de Daruvar A., Dehoux P.,
Domann E., Dominguez-Bernal G., Duchaud E., Durant L., Dussurget O.,
Entlan K.-D., Fsihi H., Garcia-del Portillo F., Garrido P.,
Gautier L., Goebel W., Gomez-Lopez N., Hain T., Hauf J., Jackson D.,
Jones L.-M., Kaerst U., Kreft J., Kuhn M., Kunst F., Kurapkat G.,
Madueno E., Maitournam A., Mata Vicente J., Ng E., Nedjari H.,
Nordsiek G., Novella S., de Pablos B., Perez-Diaz J.-C., Purcell R.,
Remmel B., Rose M., Schlueter T., Simoes N., Tierrez A.,
Vazquez-Boland J.-A., Voss H., Wehland J., Cossart P.;
"Comparative genomics of Listeria species.";
Science 294:849-852(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P29300;
01-DEC-1992
01-DEC-1992
01-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EW the European Bioinformatics Institute. There are no restr use by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR004155; PBS_lyase_HEAT Pfam; PF03130; HEAT_PBS; 3. PF03130; HEAT_PBS; 3. Phycoballisome SEQUENCE 202 AA; 21516 MW; B875;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dubbs J.M., Bryant D.A.;

"Molecular cloning and transcriptional analysis of the cpeBA operon
"Molecular cloning pseudanabaena species PCC7409.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hypothetical phycocyanin operon protein Z (ORF Z). Pseudanabaena sp. (strain PCC 7409).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last seg
15-JUN-2002 (Rel. 41, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. MEDLINE=92236425;
                                                                                                                                                                                                                                                                                                                                                                      STRAIN=EGD-e / Serovar 1/2a;
MEDLINE=21537279; PubMed=11679669;
                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=1639;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bacteria; Firmicutes; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Probable peptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P58495;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; X63073; CAA447
PIR; S18528; S18528.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bacteria; Cyanobacteria; Oscillatoriales; Pseudanabaena
NCBI_TaxID=29415;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28 NYDA 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INDUCTION: PRESENT IN BOTH RED- AND GREEN-LIGHT-GROWN CELLS. SIMILARITY: TO ITS CALOTHRIX SP. PCC 7601 HOMOLOG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _LISMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               he cyanobacterium Pseudanabaena species Microbiol. 5:3073-3085(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Rel. 41, Last sequence update) (Rel. 41, Last annotation updat ptidase Lmo0363 (EC 3.4.-.-).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Rel. 24, Created)
(Rel. 24, Last sequence up
(Rel. 25, Last annotation)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAA44797.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PubMed=1809846;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bacillales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B875183B15E4FF94 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Listeriaceae; Listeria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ጅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1; Length 202;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ror
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SQ STITE
                                                                                                                                                                                                                                       Reflect Dominguez-Bernal G., Rusniok C., Amend A.,

Baquero F., Berche P., Bloecker H., Brandt P., Chakraborty T.,

A Charbit A., Chetouani F., Couve E., de Daruvar A., Dehoux P.,

Domann E., Dominguez-Bernal G., Duchaud E., Durant L., Dussurget O.,

Entian K.-D., Fsihi H., Garcia-del Portillo F., Garrido P.,

Gautier L., Goebel W., Gomez-Lopez N., Hain T., Hauf J., Jackson D.,

A Jones L.-M., Kaerst U., Kreft J., Kuhn M., Kunst F., Kurapkat G.,

A Madueno E., Maitournam A., Mata Vicente J., Ng E., Nedjari H.,

AN Nordsiek G., Novella S., de Pablos B., Perez-Diaz J.-C., Purcell R.,

Remmel B., Rose M., Schlueter T., Simoes N., Tierrez A.,

"Comparative genomics of Listeria species.";

RI Sience 294:849-852(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Y382_LISIN
Q92ES6;
                                                                                                                               the European Bioinformatics Institute. There are no use by non-profit institutions as long as its commodified and this statement is not removed. Usage by entities requires a license agreement (See http://www
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN-CLIP 11262 / Serovar 6a;
MEDLINE-21537279; PubMed-11679669;
Hypothetical protein; Hydrolase; Serine protease; Complete proteome ACT_SITE 119 119 CHARGE RELAY SYSTEM (BY SIMILARITY).
                                   Pfam; PF03575; Peptidase.
                                                ListiList; LIN00382; -.
InterPro; IPR005320; Peptidase_S51.
                                                                                   EMBL; AL596164; CAC95615.1;
                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Listeria innocua.
Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-JUN-2002
15-JUN-2002
15-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LISIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HILEFTO, ALLEGE STI, 1.

Piam; PF03575; Peptidase_S51; 1.

Hypothetical protein; Hydrolase; Serine protease; Complete proteome. ACT_SITE 19 19 CHARCE RELAY SYSTEM (BY SIMILARITY).

ACT_SITE 160 CHARGE RELAY SYSTEM (BY SIMILARITY).

CONTRACT 205 AA; 22776 MW; 95A24BA0910C47D6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=1642;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Probable peptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LIN0382.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    use by non-profit institutions as long as its content modified and this statement is not removed. Usage by ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  between the Swiss Institute of Bioinf
the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ListiList; LMO00363;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AL591975; CAC98442.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entities
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                146 NYDA 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: BELONGS TO PEPTIDASE FAMILY S51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pro; IPR005320; Peptidase_S51, PF03575; Peptidase_S51; 1.
                                                                                                                an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Rel. 41, Created)
(Rel. 41, Last sequence update)
(Rel. 41, Last annotation update)
ptidase Lin0382 (EC 3.4...).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacillales; Listeriaceae; Listeria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 23; DE
Pred. No. 1e+
D; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 209
                                                                                                                             (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ΑÃ
                                                                                                                                                             as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Уď
                                                                                                                                                                              restrictions
                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and for
                                                                                                                                                                                             EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL outstation
                                                                                                                                                             z.
                                                                                                                                                                                                a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a collaboration -
MBL outstation -
                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                             outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   commercia.
                                                                                                                                                               no
                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0n
                                                                                                                                                             way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

Ş

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UBL3_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 4
                                                                        modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                    use
                                                                                                                                 the
                                                                                                                                                          This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACT_SITE
SEQUENCE
                         PIR; A40085;
                                    EMBL; BC018125; AAH18125
                                                  EMBL; M30496; AAA36791
                                                                                                                                                                                                                                                                                                                                                        EMBO
                                                                                                                                                                                                                                                                 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-APR-1990 (Rel. 14, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
Ubiquitin carboxyl-terminal hydrolase
                                                                                                                                                                                                                                                    <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wilkinson K.D., Lee K.,
Boss J.M., Pohl J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-APR-1990
15-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                UBL3_HUMAN P15374;
                                                                                                                                                                                                                                                                                                                                                                             Johnston S.C., Larsen C.N., Cook w|J., Wilkinson K.D., "Crystal structure of a deubiquitinating enzyme (human
                                                                                                                                                                                                                                                                                                                                                                                                       x-ray Crystallography (1.8 angstrons).
mEDLINE=97377017; Pubmed=9233788;
                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strausberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Science
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hydrolase."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "The neuron-specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=90049185; PubMed=2530630; Wilkinson K.D., Lee K., Deshpande
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-APR-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ISSUE-Lung
                                                                                                                                                                                                                                                                                                                                                                   .8-A resolution."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             146 NYDA 149
                                                                                                                                                                               CATALYTIC ACTIVITY: Ubiquitin C-terminal thiolester + H(2)0 = ubiquitin + a thiol.

SUBCELLULAR LOCATION: Cytoplasmic.

DISEASE: A DEFECT OR ALTERATION IN THE EXPRESSION OF ENZYMES CATALYZING THE REMOVAL OF UBIQUITIN FROM UBIQUITIN-PROTEINS CONJUNCTURE OF NEURODEGENERATIVE DISEASES CONJUNCTURE OF NEURODEGENERATIVE DISEASES SUCH AS ALZHEIMER'S DISEASE, PRAKINGON'S DISEASE, PROGRESSIVE SUPRANUCLEAR PALSY, AND PICK'S JAND KUF'S DISEASE.

SIMILARITY: BELONGS TO PEPTIDASE FAMILY C12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                FUNCTION: UBIQUITIN-PROTEIN HYDROLASE IS INVOLVED BOTH IN THE PROCESSING OF UBIQUITIN PRECURSORS AND OF UBIQUINATED PROTEINS. THIS ENZYME IS A THIOL PROTEASE THAT RECOGNIZE AND HYDROLYZE A PEPTIDE BOND AT THE C-TERMINAL GLYCINE OF UBIQUITIN.
                                                                                                                            European Bioinformatics Institute.
                                                                                                                                        SWISS-PROT entry is copyright. It is produced through en the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Ubiquitin thiolesterase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             246:670-673(1989).
                                                                                                                                                                                                                                                                                                                                                       16:3787-3796(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                 non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                             (DEC-2001) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            160
209
                         A40085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Rel. 14, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ä,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 160 (
23226 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               L3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHARGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C575DC41F48143F2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RELAY SYSTEM (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    is a ubiquitin carboxyl-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Duerksen-Hughes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           230 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            isozyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
                                                                                                          There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.1e+02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                              databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ľ3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (EC 3.4.19.12) (UCH-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                             restrictions
                                                                                                                                                                                                                                                                                                                                                                              Hill C.F
                                                                                                                                        EMBL
                                                                                                                                                       a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                          .P.;
                                                                                                                                           outstation
                                                                                                                                                                                                                                                                                                                                                                               at
                                                                                                   in no way commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

luch;

24-JUN-98

```
RESULT
UBL3_M
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              무
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DR FTT FTT FTT SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                    OSAWA Y., WANG Y.-L., OSAKA H., AOKI S., WADA K.;

"Cloning, expression, and mapping of a mouse gene, Uchl4, highly homologous to human and mouse Uchl3.";

Biochem. Biophys. Res. Commun. 283:627-633(2001).

-i- FUNCTION: UBIQUITIN-PROTEIN HYDROLASE IS INVOLVED BOTH IN THE PROCUESING OF UBIQUITIN-PROTEINS AND OF UBIQUIARTED PROTEINS.

THIS ENZYME IS A THIOL PROTEASE THAT RECOGNIZE AND HYDROLYZE A PEPTIDE BOND AT THE C-TERMINAL GLYCINE OF UBIQUITIN.

-I- CAPALYTIC ACTIVITY: Ubiquitin C-terminal thiolester + H(2)O -
            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                    ubiquitin + a thiol.

SUBCELLULAR LOCATION: Cytoplasmic (By similarity).

TISSUE SPECIFICITY: Expressed in various tissues.
expression in brain, liver, heart, kidney and test
expression for the state of the state 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-OUN-2002 (Rel. 41, Last annotation update)
Ubiquitin carboxyl-terminal hydrolase isozyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=C57BL/6J; TISSUE=Liver, and Kidney; MEDLINE=21240090; PubMed=11341770;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UBL3_MOUSE
Q9JKB1; Q9EQX7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Expression and functional analysis
development.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kurihara L.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=20180078; PubMed=10713173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-Swiss Webster /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UCHL3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00140; UCH_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PR00707;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF01088;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3D-structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140 NYDA 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        conjugation pathway; Hydrolase; Thiol protease; Multigene family;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (Ubiquitin thiolesterase L3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            603090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HGNC:12515; UCHL3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR001578;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    230 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95
169
184
40
178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01578; UCH_1.
Peptidase_C12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Semenova E., Levorse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UBCTHYDRLASE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20:2498-2504(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95
169
184
57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    186
26182 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UBIQUITIN BINDING 1 (POTENTIAL).
UBIQUITIN BINDING 2 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8ACACE6E1D86FD55 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of Ucl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     230
                                                                                                                                                                                                                                                                            (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Uch-L3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tilghman S.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    during mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (EC
                                                                                                                                                                                                                                    testis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3.4.19.12) (UCH-
                                                                                                                                                                                                                                                        Highest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
SOFT THE REPORT OF THE PROPERTY OF THE PROPERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DR FTT FTT CRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HEX8_ADE40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACT_SITE
ACT_SITE
DOMAIN
DOMAIN
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HEX8_ADI
P11821;
                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its muse by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                EMBL; L19443; AAC13972.1;
EMBL; M19316; AAA52198.1;
                                                                                                                                                                                                                                                                                                                                                                                              "The genes encoding the DNA binding protein and the 23K adenovirus types 40 and 41."; Virology 163:1-10(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sussenbach J.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Davison A.J., Telford E.A., Watson M. "The DNA sequence of adenovirus type J. Mol. Biol. 234:1308-1316(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human adenovirus type 4
Viruses; dsDNA viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-FEB-1996
15-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-OCT-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF01088; Peptidase_C12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AB033370; BAB20094.1; HSSP; P15374; 1UCH. MEROPS; C12.003; -.
                                                                                                           InterPro; IPR000646; Adeno_PVIII
Pfam; PF01310; Adeno_PVIII; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Vos H.L., der Lee F.M., Reemst A.M.C.B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=88160034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=94087748; PubMed=8263936;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hexon-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00707; UBCTHYDRLASE. PROSITE; PS00140; UCH_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AF247358; AAF64193.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001578; UCH_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          140 NYDA 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        conj
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _ADE40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MGI:1355274; Uchl3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         jugation
E 95
E 169
E 184
40
178
T 205
E 230 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OF 1-47 FROM N.A.
88160034; PubMed=3279700;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Rel. 12, Created)
(Rel. 33, Last sequence update)
(Rel. 38, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 n pathway;
5 95
169
184
184
57
186
207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ņo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RNA stage; Adenoviridae; Mastadenovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23; DB
Pred. No. 1.2
D; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              UBIQUITIN BINDING 1
UBIQUITIN BINDING 2
AIE -> VIK (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F147991F3ED69AC3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Protein V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           van
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           McBride
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protease; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Loon A.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ×.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mautner
                                                                                                                                                                                                                                                                                                                                                                                                                                             protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

Hexon-associated protein. PROPEP 1 111 CHAIN 112 233

SEQUENCE

233 112 111

Ą,

, WM

D135E37D3CA6DE5C

CRC64

PROTEASE) .

233 112 25327

CLEAVAGE (BY ADENOVIRUS I

```
RESULT 45
UBL4_MOUSE
ID UBL4_MOUSE
AC P58321
                                                                                                                                                                          멍
                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                         Matches
                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
 UBL4_MOUSE P58321;
                                                                                                                                                                                                                                                             EMBL; X15137; CAA33237.1;
EMBL; X52532; CAA36768.1;
PIR; A30920; SXAD41.
PIR; S10214; S10214.
                                                                                                                                                                                                                                                                                                                the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EW the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content
                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                   InterPro; IPR000646; Adeno_PVIII.
Pfam; PF01310; Adeno_PVIII; 1.
                                                                         221
                                                                                                                                                                                                                          Hexon-associated
                                                                                                                                                                                                                                                                                                                                                                                                                               "Nucleotide sequence of the region coding for 100K and 33K proteins of human enteric adenovirus type 41 (Tak).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Slemenda S.B., Pieniazek N.J., Velarde J. Jr.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pleniazek N.J., Velarde J.Jr., Pieniazek D., Luftig R.B.; "Nucleotide sequence of human enteric adenovirus type 41 hexon associated protein VIII precursor (pVIII) including the early E3 promoter.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADE41
                                                                                                                                                                                                                                                                                                                                                                                                                           Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Luftig R.B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=90272433; PubMed=2349115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 1-47 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10524;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human adenovirus type 41 Viruses; dsDNA viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hexon-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-0CT-1989 (Rel. 12, Created)
01-0CT-1989 (Rel. 12, Last sequence update)
15-UUL-1999 (Rel. 38, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P11822;
01-OCT-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HEX8_ADE41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=89345113;
                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       221 NYDA 224
                                                                                               1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NYDA 4
                                                                        NYDA 224
                                                                                                                         4;
                                                                                                                                                                                                                                                                                                                                                                                                                       Acids Res. 18:3069-3069(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Acids Res. 17:5398-5398(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4;
                                                                                                                                                                         233 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.
nilarity 100.
Conservative
                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                        protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=2762136;
                                                                                                                                                                        233
112
25309
                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .0%;
                                                                                                                                                                         MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RNA stage; Adenoviridae; Mastadenovirus
                                                                                                                        0,
                                                                                                                                                                    HEXON-ASSOCIATED PROTEIN.
CLEAVAGE (BY ADENOVIRUS P
E8FEBD7274C2B385 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                  Score 23; I
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ion update)
(Protein VIII).
       233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 1.2e+02;
ches 0;
         A
                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
                                                                                                                                  2e+02;
                                                                                                                                           Length 233;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pieniazek
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 233;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                 PROTEASE).
                                                                                                                                                                                                                                                                                                                                                                                  gh a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hexon-
                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        region
                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

DЬ Q

```
Search completed: February Job time: 6.33333 secs
                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                Matches
                                                                                                                                                 PROSITE: PS00140; UCH_1; FALSE_NEG.,
UD1 conjugation pathway; Hydrolase; Thiol protease; Multigene family.
ACT_SITE 95 BY SIMILARITY.
ACT_SITE 172 BY SIMILARITY.
ACT_SITE 187 187 BY SIMILARITY.
ACT_SITE 187 BY SIMILARITY.
DOMAIN 181 189 UBIQUITIN BINDING 1 (POTENTIAL).
DOMAIN 181 189 UBIQUITIN BINDING 2 (POTENTIAL).
                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Ubiquitin carboxyl-terminal hydrolase isozyme
L4) (Ubiquitin thiolesterase L4).
                                                                                                                                                                                                                                                                MGD; MGI:1890440; Uchl4.
InterPro; IPR001578; UCH_1
                                                143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN-C57BL/6J;
MEDLINE-21240090; PubMed=11341770;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                     1 NYDA 4
                                              NYDA 146
                                                                                                                                                                                                                                        PF01088; Peptidase_C12; 1.
S; PR00707; UBCTHYDRLASE.
                                                                                                                                                                                                                                                                                        AB035420; BAB47122.1; -.
                                                                                                          Similarity
                                                                                                                                           40
181
233 AA;
                                                                                             Conservative
                                                                                                                                             26450 MW;
                                                                                                        100.0%;
          6,
          2003,
                                                                                             0;
                                                                                            Pred. | No. 1.
; Mismatches
                                                                                                                    Score 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                            9D7899AD70C27819 CRC64;
          11:16:49
                                                                                                                    DВ
                                                                                            ..2e+02;
s 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L4
                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (E)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Euteleostomi;
; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.4.19.12) (UCH
                                                                                            0;
                                                                                           Gaps
                                                                                           0;
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  on:
                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                       Score
    SPTREMBL_21:*
1: sp_archea:*
2: sp_bacteria
3: sp_fungi:*
4: sp_human:*
5: sp_inverteb:
6: sp_mammal:*
7: sp_mhc:*
7: sp_mhge:*
10: sp_phage:*
11: sp_vius:*
12: sp_vius:*
13: sp_vertebr:
                                                                                                                                                                                      Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT943-5
23
1 nyda 4
   100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
                                                                                                                                             100.0
100.0
100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           671580 segs, 206047115 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          February 6, 2003, 11:16:00; Search time 21.3333 Seconds (without alignments) 38.634 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.3
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                 sp_plant:*
sp_vodent:*
sp_virus:*
sp_vertebrate:*
sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
sp_bacteriap:*
sp_archeap:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                 sp_archea:*
sp_bacteria:*
                                                                                                                                                                                                                                                                                                                                                                                    sp_organelle:*
                                                                                                                                                                                                                                                                                                                                                                                                                   sp_invertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                                       sp_mammal:*
                                                                                                                                                                                      Length
    26
63
63
65
65
67
77
77
77
77
77
77
77
77
                                                                                                                                                                                       DВ
   16
3
12
15
16
13
13
11
11
17
  0318782
09318781
082MH4
0820179
2 0960179
2 0954799
3 026799
3 026799
3 0295M7
1 0995M7
1 0995M7
1 0995M7
1 063051
1 77238
7 0978D6
6 0971X9
                                                                                                                                                                                       ij
                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        791
Q16782 homo sapien Q33hr1 thermus the Q83mhr4 salmonella Q95uy9 gelasinospo Q8599 sen virus. Q15423 homo sapien Q26799 trypanosoma Q8r908 thermoanaer Q9psm7 gallus gall Q9qwa6 mesocricetu Q46529 bacteroides Q9n7a7 leishmania Q63051 rattus norv P72388 staphylococ Q97bd6 thermoplasm Q97hx9 clostridium
                                                                                                                                                                                     Description
```

23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		٠	100.0	•	•	•	•	•	•	•	100.0	100.0
122	122	122	122	122	121	120	120	114	112	112	111	110	108	106	100	97	97	97	97	97	94	92	92	92	89	88	88	88
9	ഗ		4	4	IJ	11	N											N	Ν	N	13	N	N	Ν	ω	12	12	12
Q29514	Q9GSP8	Q96QN0	Q16730	Q16834	8X8A6Ö	Q8R1Z2	Q8RLF6	P79900	Q92В39	P88807	Q9xsg7	Q9XUI9	Q9PHI7	Q8Y3W8	Q927D0	Q9WW50	Q9WW51	Q9X3Q1	Q9X3Q0	Q9x3p9	Q9PT87	Q9LAA6	Q9LAA7	Q9K365	Q96UY7	Q84218	092357	092350
	holot	homo	homo	Q16834 homo sapien	Q9v8y8 drosophila	Q8r1z2 mus musculu	Q8rlf6 bradyrhizob	P79900 oncorhynchu	Q92b39 listeria in	P88807 human papil	Q9xsg7 felis silve	Q9xui9 caenorhabdi	xy1	listeria		Q9ww50 streptococc	97	U2	Q9x3q0 streptococc	strepto	gallus ga		Ų	strep	jelasi r	84218	2357 human	092350 human papil

 $\begin{array}{c} 117 \\ 128 \\ 138 \\$

ALIGNMENTS

RA P	RL	RТ	RT	RA	RX	RΡ	RN	RL	RT	RT	RA	RX	RP :	RN	RL	RT	RT	RT	RA	RA	RX	RP	RN	OX.	റ്റ	റ്റ	SO	Q N	DE	DT	P	Ę.	5 6	1D 0	RESULT
[4] SEQUENCE FROM N.A. Baba S., Masaqo S., Shirasawa H., Tsutsui Y.;	Arch. Biochem. Biophys. 303:361-366(1993).	,	"A novel polymorphism of human serum amyloid A protein. SAAl gamma, is	Baba S., Toshie T., Kasama T., Fujie M., Shirasawa H.;		SEQUENCE FROM N.A.	[3]		cells.";	"The human acute-phase serum amyloid A gene family: structure,	Betts J.C., Edbrooke M.R., Thakker R.V., Woo P.:	MEDLINE=9202342; PubMed~1656519;	SEQUENCE FROM N.A.		Biochemistry 24:2931-2936(1985).	DNA.";	processing of preSAA and structural variants defined by complementary	"Human serum amyloid A (SAA): biosynthesis and postsynthetic	•	Sipe J., Colten H., Goldberger G., Edge M.D., Tack B., Cohen A.,	MEDLINE=85252712; PubMed=3839415;	SEQUENCE FROM N.A.	[1]		Primates; Catarrhini; Hominidae;	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Homo sapiens (Human).		id A protein (Fra	(TrEMBLrel. 19,	(TremBLrel, 01,	01-NOV-1996 (TrEMBLrel. 01, Created)		016782 DREITMINARY: DRT: 26 AA	III 1

```
RESULT OF SHEET OF SH
RESULT
Q8ZMH4
ID Q8A
ID Q8A
AC                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SO FITTORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 4
                                                                                                                                08ZMH4;
08ZMH4;
01-MAR-2002
01-MAR-2002
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-DEC-2001
01-DEC-2001
01-DEC-2001
Gyrase B (Fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q93HR1;
Q93HR1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Acute ph
NON_TER
VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NON_TER
                                                STM2906.
Salmonella typhimurium
                                                                                                   Putative cytoplasmic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HOShino T., Nonaka E., Kobayashi H., Kos
"XhoI-type restriction and modification
thermophilus HB27.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "A novel allelic variant of human serum amyloid A, SAA1 g probable risk factor for inflammation-related AA-amyloido Submitted (JUN-194) to the EMBL/GenBank/DDBJ databases. --- FUNCTION: MAJOR ACUTE PHASE REACTANT. APOLIPOPROTEIN COMPLEX (BY SIMILARITY). --- TISSUE SPECIFICITY: PLASMA, SYNTHESIZED BY THE LIVER SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   thermophilus HB27.";
Submitted (JUL-2001) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Thermus thermophilus Bacteria; Thermus/Dei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-HB27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=274;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProDom; PD002112; Serum_amyloid_A;
PROSITE; PS00992; SAA; 1.
Acute phase; Amyloid; HDL; Plasma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Thermaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00277; SAA_proteins;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           interPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                 Ν
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: BELONGS TO THE SAA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NYDA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D32001; BAA06768.1; -. Pro; IPR000096; Serum_amyloid_A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AB066587; BAB68512.1;
ER 36 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    h 100.0%;
Similarity 100.0%;
4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Fragment).
                         Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Thermus/Deinococcus e; Thermus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [ (TrEMBLrel.
[ (TrEMBLrel.
[ (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26
                                                                                                                                (TrEMBLrel.
                                                                                                                                                                                      (TrEMBLrel.
                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1
19
24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3849 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                      protein
                                                                                                                                20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₩.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19,
19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .0%;
                         gamma
                                                                                                                                Created)
Last sequence
Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E615D83AC95F4500 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A -> V (IN REF. 1).
A -> V (IN REF. 2).
20952938D5E5AB2D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
Pred.
                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                         subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                sequence up
annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Deinococci; Thermales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kosuge
                                                                                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                                                            A
                                                                                                                                update)
on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                         Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA-amyloidosis.";
databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exists
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Thermus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    żs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

```
Q8V9U8
ID Q8
AC Q8
DT 00
DT 00
DT 00
DT 00
CS SI
OC V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
Q96UY9
                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 4
                             Q8V9U8;
Q8V9U8;
Q1-MAR-2002
Q1-MAR-2002
Q1-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                    Q96UY9;
Q96UY9;
01-DEC-2001
01-DEC-2001
01-JUN-2002
          ORF1 (Fragment).
SEN virus.
                                                                                                                                                                                                                    NON_TER
                                                                                                                                                                                                                                                                                                                                                          MATA-1.
Gelasinospora calospora.
Gelasinospora; Fungi; Ascomycota; Pezizomycot:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

STRAIN-LT2 / SGSC1412 / ATCC 700720;

MEDLINE-2153948; PubMed-11677609;

MCClelland M., Sanderson K.E., Spieth J., Clifton S.W.,

Courtney L., Porwollik S., All J., Dante M., Du F., Hou

Courtney L., Porwollik S., All J., Dante M., Grewal N.,

Leonard S., Nguyen C., Scott K., Holmes A., Grewal N.,

Ryan E., Sun H., Flores L., Miller W., Stoneking T., NP

Waterstron B. Willer B., Miller W., Stoneking T., NP
                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                     MEDILINE-21453106; PubMed-11567551; Dettman J.R., Harbinski F.M., Taylor J.W.;
"Ascospore morphology is a poor predictor of the phylogenetic relationships of Neurospora and Gelasinospora.";
Fungal Genet. Biol. 34:49-61(2001),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nature 413:852-856(2001).
EMBL; AE008832; AAL21786.1; -
Hypothetical protein; Complete
SEQUENCE 62 AA; 6991 MW; 68
                                                                                                                                                                                                                                                                                                                                                                                                          Mating-type
                                                                                                                                                                                                                                          Pfam; PF00505;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Complete
LT2.";
                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Waterston R., Wilson R.K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=602;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                          60
                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32 NYDA
                                                                                                                                              1 NYDA 4
                                                                                                                         | | | |
NYDA
                                                                                                                                                                                                                                                  AF388942; AAL28010.1;
Pro; IPR000910; HMG_12
                                                                                                                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
 ssDNA viruses; unclassified
                                                                                                                          63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genome
                              2 (TrEMBLrel.
2 (TrEMBLrel.
2 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel. 19, (TrEMBLrel. 21, protein Mat a-1
                                                                                                                                                                                                           63 AA;
                                                                                                                                                                                                                                                                                                                            958;
                                                                                                                                                                  Conservative
                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                     63
                                                                                                                                                                                                                                         HMG_box;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence
                                                                                                                                                                                                           7809 MW;
                                                                                                                                                                                                                                                                 34:49-61(2001).
                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                  HMG_12_box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100
                              20,
20,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of Salmonella
                             Created)
Last sequentias tast anno
                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                           (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                     Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                           Score 23;
Pred. No.
                                                                                                                                                                                                           7A1F23ECE0EF7C8F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ce proteome.
68F6990F502F08BB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
Pred!
                                                                                                                                                                                                                                                                                                                                                                            Pezizomycotina;
                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                              sequence update) annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.
 ssDNA viruses
                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                               63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.4e+02;
                                                                                                                                                                           2.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       enterica
                                                                       ₽
                                                                                                                                                                                       DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16;
                                                                                                                                                                                                                                                                                                                                                                              Sordariomycetes;
                                                                                                                                                                                      Length 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     serovar Typhimurium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S.W.,
                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nhan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ou S., Layman D.,
Mulvaney E.,
                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ď.,
                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
RESULT
Q15423
ID Q15423
OD DT Q1
DT Q1
OT 
                                                                                                                                                 RESULT
Q26799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
    밁
                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 4; Conservative (
                                       Q26799
Q26799;
Q1-NOV-1996
Q1-NOV-1996
Q1-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q15423;
Q15423;
Q1-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                             NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-90262544; PubMed-1971508; Steinkasserer A., Weiss E.H., Schwaeble W., Linke R.P.; Heterogeneity in human serum amyloid A protein. Five different variants from one individual demonstrated by cDNA sequence analy Biochem. J. 268:187-193(1990).
BMBL; X51443; CAA35808.1; -.
InterPro; IPR000096; Serum_amyloid_A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wilson L.E., Umemura T., Astemborski J., Ray S.C., Alter H.J., Strathdee S.A., Vlahov D., Thomas D.L.;
"Dynamics of SEN Virus Infection among Injection Drug Users.";
J. Infect. Dis. 184:1315-1319(2001).
EMBL: AV052821; AAL14827.1;
InterPro; IPR004219; TTY-Virus_Unk.
Pfam; PF02956; TT_ORF1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00306; SERUMAMYLOID. ProDom; PD002112; Serum_amyloi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SAA protein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1996
01-DEC-2001
                 01-NOV-1996 (TrEMBLrel 01
01-NOV-1996 (TrEMBLrel 01
01-MAR-2002 (TrEMBLrel 20
Protein kinase (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART; SM00197; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=21536993; PubMed=11679921;
  Trypanosoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID-9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=136966;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37 NYDA 40
                                                                                                                                                                                                                                    52 NYDA 55
                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PF00277; SAA_proteins;
                                                                                                                                                                                                                                                                                                                      Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1
63
63 AA;
                                                                                                                                                                                                                                                                                                                                                                                                         64 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel. 01, (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                   100.0%; ilarity 100.0%; Conservative (
    brucei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                             64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Serum_amyloid_A;
                                                                                                                                                                                                                                                                                                                                                                                                       64
7079 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63
7374 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata;
Primates;
                                     20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
Last sequence update)
Last annotation update)
                                   Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8A8B3939FA402D3E CRC64;
                                                                                                                                                                                                                                                                                                                 Score 23; DB 4; r
Pred. No. 2.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                         057D6C9B0BE06238 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 23; DB 12;
Pred. No. 2.4e+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              64
                                                                                                                             65
                                                                                                                             æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                           Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 63;
                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      analysis.";
                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
OS DOT DAC
```

```
RESULT
Q8R908
                                                 δÃ
                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                        Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kinase.
NON_TER
NON_TER
SEQUENCE
                                                                                                                 STRAIN-MB4T / JCM11007;

MEDLINE-21992816; pubmed-11997336;

Bao Q., Tian Y., Li W., Xu Z., Xuan Z., Hu S., Dong !

Chen Y., Xue Y., Xu Y., Lai X., Huang L., Dong X., M.

Tan H., Chen R., Wang J., Yu J., Yang H.;

"A complete sequence of T. tengcongensis genome.";

Genome Res. 12:689-700(2002).

EMBL; AE013134; AAM25015 1; -

Hypothetical protein; Complete proteome.

Hypothetical protein; AF00402B3B8D9DA0 CRC64;
                                                                                                                                                                                                                                                                                          OBR908; PRELIMINARY; PRT; 66 AA. QBR908; (TrembLrel. 21, Created) 01-JUN-2002 (TrembLrel. 21, Last sequence update) 01-JUN-2002 (TrembLrel. 21, Last annotation update) Hypothetical protein TTE1824.
                                                                                                                                                                                                                                                         Thermoanaerobacter tengcongensis.
Bacteria; Firmicutes; Bacillus/Clostridium group; Clostridia; Thermoanaerobacteriales; Thermoanaerobacteriaceae; Thermoanaerobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; L10994; AAA19806.2; -.
Interpro: Topococci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN-TREU667;
MEDLINE-94171906; PubMed-8126084;
Hua S.B., Wang C.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Eugle
NCBI_TaxID=5691;
[1]
                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00069; pkinase;
ProDom; PD000001; Euk_p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              brucei
                                                                                                                                                                                                                                                 NCBI_TaxID=119072;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               interPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Differential accumulation of a protein kinase homolog in Trypanosoma
9
                                                                                                                                                                                                                                                                                                                                                                                8
                              23
                                                                                                                                                                                                                                                                                                                                                                                                                54 NYDA 57
                                                                                                                                                                                                                                                                                                                                                                                                                                     \vdash
                                                    1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                          NYDA 4
                              NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PF00069;
                                                                        Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                           4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PS50011;
                               26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR000719;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euglenozoa; Kinetoplastida; Trypanosomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1
65
` AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; ilarity 100.0%; Conservative
                                                                        100.0%; ilarity 100.0%; Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Euk_pkinase; 1.
PROTEIN_KINASE_DOM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1
65
7463 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Euk_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A701F31B9D7BADAF CRC64;
                                                                                  Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 23;
Pred. No.
                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                        . 2.5e+02;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 2.5e+02;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 5;
                                                                                              DB 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 65;
                                                                                             Length
                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                   Ma
                                                                                                                                                                                                                                                             Thermoanaerobacter.
                                                                                                                                                                                             Σ
                                                                                                                                                                                 ۲.
                                                                                                                                                                                            Yang
                                                                                                66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Trypanosoma
                                                                                                                                                                                  Ling
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                         0
                                                                                                                                                                                  ۲.,
                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

DE AA=9 kDa reactive AA-type JOINT amyloid protein.
OS Gallus gallus (Chicken).

update)

Q9PSM7

```
RESULT 11
Q46529
ID Q4652
                                                                                                                                                                                                                                                                                                 RESULT

QUANT

ID QUANT

AC QUANT

A
                                                                                                                     В
                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9QWA6;
Q9QWA6;
01-MAY-2000
    046529
                                                                                                                                                                                                                                                                                              Acute phase; Amyloid; HDL; Plasma.
NON_TER 1 1
NON_CONS 22 23
NON_TER 70 70
SEQUENCE 70 AA; 7897 MW; 568E5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-94126673; PubMed-8296166;
Niewold T.A., Murphy C., Gruys E.;
Scand. J. Immunol. 39:225-227(1994).
-i- FUNCTION: MAJOR ACCUTE PHASE REACTANT. APOLIPOPROTEIN OF THE HDL
COMPLEX (BY SIMILARITY).
-i- TISSUE SPECIFICITY: PLASMA, SYNTHESIZED BY THE LIVER (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-96228953; PubMed-8633201;
Landman W.J., Sletten K., Koch C.A., "Chicken joint amyloid protein is of of the amyloid protein.";
Scand. J. Immunol. 43:210-218(1996).
InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_proteins; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY).
-!- SIMILARITY: BELONGS TO THE SAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Serum amyloid A protein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00992;
                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART; SM00197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mesocricetus auratus (Golden hamster)
Eukaryota; Metazoa; Chordata; Craniata
Mammalia; Eutheria; Rodentia; Sciurogr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00306; SERUMAMYLOID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10036;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mesocricetus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINTS; PR00306; SERUMAMYLOID.
ProDom; PD002112; Serum_amyloid_A;
SMART; SM00197; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Archosauria; Aves; Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                     29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     45 NYDA 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 NYDA 4
                                                                                                                                                             NYDA 4
                                                                                                                     NYDA
                                                                                                                                                                                                        Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                    PD002112; Serum
SM00197; SAA; 1.
                                                                                                                     ω
2
                                                                                                                                                                                                      Conservative
  PRELIMINARY;
                                                                                                                                                                                                                                                                                          22
70
AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
                                                                                                                                                                                                                                                                                                                                                                                                            SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Serum_amyloid_A; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7463 MW;
                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Serum_amyloid_A.
                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                              568E516C9D45E84C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0D1DC87116ABA706 CRC64;
                                                                                                                                                                                                 Score 23; DB 11; Length Pred. No. 2.7e+02; Mismatches 0; Indels
PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vert
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 23; I
Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tooten P.C.,
the AA-type.
77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vertebrata; Euteleostomi;
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 67;
                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gruys E.;
I. Characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cricetinae;
                                                                                                                                                                                                                                                 70;
                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
Q63051
ID Q
AC Q
DT 0:
DT 0:
                                                                        DЬ
                                                                                                                                             RESULT 12
Q9N7A7
                                              RESULT 13
                                                                                        γ
                                                                                                                                                                                                                                                                                                                                                                             뫄
                                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             La Fontaine S., Rood J.I.;
"Organization of ribosomal RNA ger
Dichelobacter nodosus.";
Microbiology 142:889-899(1996).
EMBL; U26682; AAC13873.1;
HSSP; P00349; 2FcD.
 Q63051;
Q63051;
01-NOV-1996
01-NOV-1996
                                                                                                                                                                                                                                                                                             01-OCT-2000
01-OCT-2000
01-JUN-2002
                                                                                                                                                     NON_TER
                                                                                                                                                                       InterPro; IPRO01023; Hsp70. Pfam; PF000102; Hsp70; 1. ProDom; PD0000012; Hsp70; 1.
                                                                                                                                                                                                                                                                                                                        Q9N7A7;
                                                                                                                                                                                             Murphy L., Quail M., Harris Submitted (JUL-2000) to the EMBL; AL390935; CAC01030.1;
                                                                                                                                                                                                                                                                            Probable heat-shock LM28.327.
                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                         STRAIN-FRIEDLIN;
                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                           Leishmania major.
Eukaryota; Euglenozoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00393; 6PGD; NON_TER 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bacteroides nodosus (Dichelobacter Bacteria; Proteobacteria; gamma suf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q46529;
01-NOV-1996 (TrEMBLrel.
01-NOV-1996 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                    NCBI_TaxID=5664;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=97090407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-A198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORFC protein (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=870;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dichelobacter
                                                                                                                                                                                                                                                                                                                                                                            74 NYDA
                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                        9 NYDA
                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                   Similarity
                                                                                                          4;
                                                                                                                                                                 PD000089; Hsp70; 1.
                                                                        12
                                                                                                                                                                                                                                                                                                                                                                             77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR001744; 6PGD.
                                                                                                                                            80
                                                                                                                                                                                                                                                                                   0 (TrEMBLrel. 15,
) (TrEMBLrel. 15,
2 (TrEMBLrel. 21,
sat-shock protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                77 AA;
(TrEMBLrel.
                           PRELIMINARY;
                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                      80
                                                                                                                                            AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=8936315;
                                                                                                                                           80
9183 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                8431 MW;
                                                                                                                100.0%;
                                                                                                                                                                                                                                                           Kinetoplastida;
01,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01,
01,
19,
Created)
Last sequence update)
                                                                                                          0;
                                                                                                                                                                                                      D., Rajandream M., EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                    Last sequence update)
Last annotation update)
(Fragment).
                                                                                                                                                                                                                                                                                                               Created
                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last
Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                           6FADCCA0F94BA82A CRC64;
                                                                                                       Score 23; DB 5; 1
Pred. No. 3.1e+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                668EEBAA08B49B78 CRC64;
                           PRT;
                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                      Scoré 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     genes
                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence update) annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nodosus).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from the
                           80
                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                          Trypanosomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                      3e+02;
                           A
                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cardiobacteriaceae;
                                                                                                                                                                                                      databases.
                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   footrot pathogen
                                                                                                                         Length 80;
                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                Barrell
                                                                                                                                                                                                                                                           Leishmania.
                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                               в.;
                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
P7238LT
P7238B
ID P7738B
ID P7738B
ID P7701
D7701
D770
    RESULT
Q978D6
ID Q9
AC Q9
DT 01
DT 01
DT 01
DT 01
DT 01
DT 01
DT T1
OE Hy
GN TV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뭐
                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
Q97BD6
Q97BD6;
Q97BD6;
Q97BD6;
Q97BD6;
Q1-OCT-2001 (TIEMBLIFE1. 18, C
Q1-CCT-2001 (TIEMBLIFE1. 18, L
Q1-MAR-2002 (TIEMBLIFE1. 20, L
Hypothetical protein TV0520.
TV0520 OR TVG0510164.
Thermoplasma volcanium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P72388;
P72388;
01-FEB-1997
01-FEB-1997
01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lipoprotein.
NON_TER
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
TRANSPOSON-TN551;
MCNamara P.M., Iandolo J.J.;
Submitted (OCT-1996) to the EMBL/GenBank/DDBJ
EMBL; U75367; AAB18959.1;
InterPro; IPR002513; Transposase_7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacteria; Firmicutes; Staphylococcus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Transposase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Proc. Natl. Acad. Sci. U.
EMBL; M23049; AAA40753.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-89098961; PubMed-2911593;
Tennyson G.E., Sabatos C.A., Higuchi K., Meglin N., Brewer
"Expression of apolipoprotein B mRNAs encoding higher- and
molecular weight isoproteins in rat liver and intestine.";
Proc. Natl. Acad. Sci. U.S.A. 86:500-504(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Staphylococcus aureus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10116;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                           NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=1280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-LIVER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APOB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Apolipoprotein B (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                          NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14
                                                                                                                                                                                        15
                                                                                                                                                                                                                                                                                                                                Local Similarity
nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      74
                                                                                                                                                                                                                                                    39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NYDA 77
                                                                                                                                                                                                                                                    NYDA 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PF01526; Transposase_7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                     81 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel. 02,
(TrEMBLrel. 02,
(TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80
9485 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                   9490 MW;
                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacillus/Clostridium
                                                               Last
Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last
                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                        Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB679A0C93AAA2F7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                   B957359583F72C12 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23; DB 11;
Pred. No. 3.1e+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                        Score 23; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata;
Sciurognathi; Muridae;
                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                               sequence up
annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                                                                                                                                83
                                                                                                                                                                                                                                                                                                                                                                           BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                .2e+02;
s 0;
                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    group; Bacillales;
                                                                                                                                                                                                                                                                                                                                                                           2
                                                               update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            databases
                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lower-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H.B.Jr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus
                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
RESULT
092350
                                                                                                                                              Ş
                                                                                                                                                                                                                RESULT
Q97HX9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 4
                                                                                                                                                                    Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                               Q97HX9
Q97HX9;
01-OCT-2001
01-OCT-2001
01-OCT-2001
                           092350;
01-NOV-1998
01-NOV-1998
01-DEC-2001
                                                                                                                                                                                                                                           STRAIN-ATCC 824 / DSM 792 / VKM B-1787;
MEDLING-2135925; PubMed-11466286;
Noelling J., Breton G., Omelchenko M.V., Makarova K.S., Zeng Gibson R., Lee H.M., Dubois J., Qiu D., Hitti J., Wolf Y.I., Tatusov R.L., Sabathe F., Doucette-Stamm L., Soucaille P., Da Bennett G.N., Koonin E.V., Smith D.R.;
"Genome sequence and comparative analysis of the solvent-prod bacterium Clostridium acetobutylicum.";
J. Bacteriol. 183:4823-4838(2001).
                                                                                                                                                                                                                                                                                                                                                                          Clostridium acetobutylicum.
Bacteria; Firmicutes; Bacillus/Clostridium
Clostridiales; Clostridiaceae; Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kawashima T., Amano N., Koike H., Makino S.-I., Higuchi S. Kawashima-Ohya Y., Watanabe K., Yamazaki M., Kanehori K., Nunoshiba T., Yamamoto Y., Aramaki H., Makino K., Suzuki Parchaeal adaptation to higher temperatures revealed by ge sequence of Thermoplasma volcanium."; Proc. Natl. Acad. Sci. U.S.A. 97:14257-14262(2000).
        L1 protein
Human papii
                                                                        092350
                                                                                                                                                                                                               J. Bacteriol. 183:4823-4838
EMBL; AE007696; AAK79841.1;
Hypothetical protein; Compl.
SEQUENCE 85 AA; 9954 MW;
                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. STRAIN-ATCC 824 /
                                                                                                                                                                                                                                                                                                                                                                                                           Hypothetical CF-8 CAC1877.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hypothetical protein; Complete proteome. SEQUENCE 83 AA; 9869 MW; BC587A016EBD7DAE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Thermoplasmataceae; NCBI_TaxID=50339;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=GSS1 / DSM 4299 / JCM 9571;
MEDLINE=20570466; PubMed=11121031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Archaea;
                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=1488;
                                                                                           17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25 NYDA
                                                                                                                           4
                                                                                                                                                ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          I NYDA 4
                                                                                                                                      NYDA 4
                                                                                                                           NYDA
       otein (Fragment).
papillomavirus.
                                                                                                                                                                   l Similarity
4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euryarchaeota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28
                            (TrEMBLrel.) (TrEMBLrel.) (TrEMBLrel.)
                                                                                                                                                                                                                                                                                                                                                                                                                               (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                           protein; Compa
                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                    family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Thermoplasma
                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                            Complete proteome.
54 MW; 6DBFE46C8A85900E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                              18,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Thermoplasmata;
                              08,
19,
                                                                                                                                                                                                                                                                                                                                                                                                                    18, Last annotation protein CAC1877.
                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
Last sequence Last anno
                            Created)
Last sequence
Last anno
                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                              Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
Pred.
                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                              sequence up
annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence
                                                                                                                                                                                No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85
                                                                        88
                                                                                                                                                                              3.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Thermoplasmatales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
                                                                                                                                                                                           DB 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .3e+02;
                                      update)
                                                                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                                                                                                                                                                    group;
                                                                                                                                                                                                                                                                                                                                                                                                                               update)
                            update)
                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                   solvent-producing
                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                       Clostridia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Suzuki M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                           85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kawamoto
                                                                                                                                                                                                                                                                                        Daly M.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                    Gaps
                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

viruses,

no

RNA stage;

Papillomaviridae;

```
RESULT 19
Q84218
ID Q8421
AC Q8421
DT 01-N0
DT 01-JU
DE L1 (F
GN L1.
                                                                                                                    뮍
                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 4
                                                                                                                                                         Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                          092357
092357;
092357;
01-NOV-1998 (TrEMBLrel. 0
01-NOV-1998 (TrEMBLrel. 0
01-DEC-2001 (TrEMBLrel. 1
Q84218;
Q84218;
Q1-NOV-1996
01-NOV-1996
01-JUN-2001
L1 (Fragment
L1.
                                                                                                                                                                                                                                                                   STRAIN=HPVX10B;
MEDLINE=20295075; PubMed=10834958;
Berkhout R.J.M., Bouwes Bavinck J.N., ter Schegget
Persistence of Human Papillomavirus DNA in Benign
Skin Lesions from Renal Transplant Recipients.";
J. Clin. Microbiol. 38:2087-2096(2000).
                                                                                                                                                                                                             NON_TER
                                                                                                                                                                                                                               Piam; PF00500; late_protein_L1; Probom; PD000544; PV_capsid_L1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Berkhout R.J.M., Bouwes Bavinck J.N., ter Schegget J., "Persistence of Human Papillomavirus DNA in Benign and Skin Lesions from Renal Transplant Recipients."; Clin. Microbiol. 38:2087-2096(2000).

EMBL; AF091439; AAC63347-1; -
InterPro; IPR002210; PV_capsid_L1.
Pfdam; PF00500; late_protein_L1; 1.
ProDom; PD000544; PV_capsid_L1; 1.
                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                           InterPro; IPR002210; PV_capsid_L1.
Pfam; PF00500; late_protein_L1; 1.
                                                                                                                                                                                                                                                               EMBL; AF091446; AAC63354.1;
                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                       Papillomavirus
                                                                                                                                                                                                                                                                                                                                                                             Viruses; dsDNA viruses, no
                                                                                                                                                                                                                                                                                                                                                                                        Human papillomavirus
                                                                                                                                                                                                                                                                                                                                                                                                 L1 protein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NON_TER
                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10566;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=20295075; PubMed=10834958;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10566;
                                                                                                                  11
           (Fragment).
                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11 NYDA 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NYDA 4
                                                                                                                  NYDA 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
4; Conserv
                  6 (TrEMBLrel. 01, 05 (TrEMBLrel. 01, 01, 01)
                                                                                                                                                                                                    88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88
                                                             PRELIMINARY;
                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                             88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88
                                                                                                                                                                                                  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA;
                                                                                                                                                                                                 10032 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10086 MW;
                                                                                                                                                        100.0%; S
100.0%; P
ative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88
               Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                             RNA stage;
                                                                                                                                                                                                                                                                                                                                                                                                         Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                   Score 23;
Pred. No.
                                                                                                                                                                                                21A64076DC03298A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E91F3B8BF7B5B1A6 CRC64;
                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                            88
                                                                                                                                                                                                                                                                                                                                                                             Papillomaviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     88
                                                                                                                                                        . 3.5e+02;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 12;
                                                                                                                                                                            DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .5e+02;
                                                                                                                                                                           Length 88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 88;
                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                           J.;
and
                                                                                                                                                                                                                                                                                           (Pre)malignant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Pre)malignant
                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
RESULT 21
Q9K365
    AC
AC
                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
Q96UY7
                                                                          멍
                                                                                                                                                        뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                         Q96UY7;
Q96UY7;
01-DEC-2001
01-DEC-2001
01-MAR-2002
Q9K365 PRELIMINARY;
Q9K365;
Q1-OCT-2000 (TrEMBLrel. 15,
                                                                                                                                                                  NON_TER
                                                                                                                                                                                    Pfam;
                                                                                                                                                                                           "Ascospore morphology is a poor predictor of the phylogenetic relationships of Neurospora and Gelasinospora."; Fungal Genet. Biol. 34:49-61(2001).|
EMBL; AF388944; AAL28012.1; -
EMBL; AF388944; HMG_12_box.
                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                             STRAIN-FGSC 7033;
MEDLINE-21453106; PubMed-11567551; |
Dettman J.R., Harbinski F.M., Taylor
                                                                                                                                                                                                                                                                                                        Eukaryota; Fungi;
Sordariales; Sord
                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                NCBI_TaxID=94610;
                                                                                                                                                                                                                                                                                                                            Gelasinospora tetrasperma
                                                                                                                                                                                                                                                                                                                                                Mating-type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; L38912; AAA74306.1; InterPro; IPR002210; PV_capsid_L1.
Pfam; PF00500; late_protein_L1; 1.
ProDom; PD000544; PV_capsid_L1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Nested PCR approach for detection and typing verruciformis associated human papillomavirus cancers from renal transplant recipients.";
J. Clin. Microbiol. 33:690-695(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Berkhout R.J., Tieben L.N
ter Schegget J.;
"Nested PCR approach for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Papillomavirus.
NCBI_TaxID=37954;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human papillomavirus type ?
Viruses; dsDNA viruses, no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=KREMSDORF ET AL;
MEDLINE=95270695; PubMed=7751378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM
                                                                         86
                                                                                                                                                                                                                                                                                                                                                                                                                      20
                                                                                    1 NYDA
                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                   11 NYDA 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                        NYDA
                                                                                                                                                                                  PF00505; HMG_box;
                                                                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                         89
                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       dsDNA viruses,
                                                                                                                                                       89 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88
                                                                                                                                                                                                                                                                                                                                               (TrembLrel. 19, (TrembLrel. 19, (TrembLrel. 20, protein Mat a-1
                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88
AA;
                                                                                                                                                                  89
                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                        Sordariaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tieben L.M.,
                                                                                                                                                                                                                                                                                                                   Ascomycota; Pezizomycotina; Sordariomycetes;
                                                                                                                                                        10984 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88
10084 MW;
                                                                                                                                                                89
                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22.
> RNA stage; Papillomaviridae;
                                                                                                                                                                                                                                                                                                        Gelasinospora.
   Created)
                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                               (Fragment).
                                                                                                                                                                                                                                                                                                                                                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                            Created
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Smits
                                                                                                                        Score 23;
Pred. | No.
                       PRT;
                                                                                                                                                     8DDD4C4497AC9A29 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 23; DB 12;
Pred. No. 3.5e+02;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FB14AA8BE9AA5058 CRC64;
                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H.L.,
                                                                                                                                                                                                                                              J.W.;
                      92
                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                        3.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bavinck J.N.,
                                                                                                                                                                                                                                                                                                                                                                                                 AA
                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of epidermodysplasia types in cutaneous
                                                                                                                                 Length 89;
                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vermeer B.J.,
                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ٥,
                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

```
SO DE RELETE DE RECEDENCE DE RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
Q9LAA7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DT DE CONTRACTOR    Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O9LAA7;
O9LAA7;
O1-ACT-2000 (TremBLrel. 1
01-OCT-2000 (TremBLrel. 1
01-MAR-2002 (TremBLrel. 2
                                                                                                                            NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                   Perrandiz M.J., Oteo J., Aracil B., Gomez-Garces J.L., De La Campa A.G.;
De La Campa A.G.;
"Drug efflux and parC mutations are involved in fluoroquinolone resistance in viridans group streptococci.";
Antimicrob. Agents Chemother. 43:2520-2523(1999).
EMBL; AF144786; ARF67237.1; -.
HSSP; P09097; IAB4.
HSSP; P09097; IAB4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                InterPro; IPR002205; DNA_topoisoIV.
Pfam; PF00521; DNA_topoisoIV; 1.
ProDom; PD000742; DNA_topoisoIV; 1.
SMART; SM00434; TOP4c; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacteria; Firmicutes;
Streptococcaceae; Stre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GYRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMART; SM00434; TOP4c;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR002205; DNA_topoisoIV.
Pfam; PF00521; DNA_topoisoIV; 1.
ProDom; PD000742; DNA_topoisoIV; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AF144785; AAF67235.1;
EMBL; AF144784; AAF67235.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Drug efflux and parC mutations are involved in fluoroquinolone resistance in viridans group streptococci."; Antimicrob. Agents Chemother. 43:2520-2523(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ferrandiz M.J., Oteo
De La Campa A.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=V8, AND V1;
MEDLINE=99437795;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Streptococcaceae;
NCBI_TaxID=28037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Streptococcus mitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-2000
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-99437795;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=1303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HSSP; P09097;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gyrase subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gyrase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NYDA 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.
   Similarity
4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Firmicutes; Bacillus/Clostridium group; Lactobacillales;
                                                                                                                            92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; ilarity 100.0%; Conservative
   100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel. (TrEMBLrel.
                                                                                                                         92
2 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       oralis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PubMed=10508036;
Aracil B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PubMed=10508036;
teo J., Aracil B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Streptococcus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Streptococcus.
                                                                                                                            10479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ⋗
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92

    15, Created)
    15, Last sequence update)
    20, Last annotation updat
(Fragment).

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bacillus/Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15,
20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W.
                                                                                                                            WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                            Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 23;
Pred. No.
                                                                                                                         679440221C604AB6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37D040221C604AB1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gomez-Garces J.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3.6e+02;
                                                                DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
                                   .6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                            Length 92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lactobacillales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
Gaps
   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
```

```
RESULT
OPPT87
ID PP87
AC OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT87
OPPT8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT

Q1 AAC

Q2 AAC

Q2 AAC

Q3 AAC

Q4 AAC

Q5 AAC

Q6 AAC

Q7 AAC

Q7 AAC

Q7 AAC

Q8 AAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAY-2000
01-MAY-2000
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-OCT-2000
01-OCT-2000
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9PT87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=99437795; PubMed=10508036;

Ferrandiz M.J., Oteo J., Aracil B., Gomez-Garces J.L.,

De La Campa A.G.;

"Drug efflux and parC mutations are involved in fluoroquinolone
"Drug efflux and parC mutations are involved in fluoroquinolone";
                                                                                                                     TISSUE-LIVER;
MEDLINE-20392157; PubMed-10933711;
Feldmann A., Schaefer M.K.H., Garten
"Targeted infection of endothelial ce
A/FPV/Rostock/34 (H7N) in chicken en
J. Virol. 74:8018-8027(2000).
Uirol. 74:8018-8027(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR002205; DNA_topoisoIV, Pfam; PF00521; DNA_topoisoIV; 1. ProDom; PD000742; DNA_topoisoIV; 1. SMART; SM00434; TDP4c; 1. NON_TER 1 .1
NON_TER 92 92
                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       resistance in viridans group streptococci."; Antimicrob. Agents Chemother. 43:2520-2523(1999). EMBL; AF144787; AAF67238.1; -. HSSP; P09097; 1AB4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Streptococcus mitis. Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Streptococcaceae; NCBI_TaxID=28037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GYRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA gyrase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9LAA6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9LAA6
                                InterPro;
                                                          MEROPS; S08.076;
                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Proprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               83 NYDA 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NYDA
ero; IPR000209;
PF00082; Peptio
                                                                                           Q45670;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O (TrEMBLrel. 13, Created)
O (TrEMBLrel. 13, Last sequence update)
I (TrEMBLrel. 19, Last annotation updat convertase PC6 (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            subunit A (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
                                                                                              1DBI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata; Craniata; Vertebrata; Euteleostomi;
Veognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bacillus/Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15,
15,
20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 3.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05ED40220B477AA6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence
                                                                                                                                                                               embryos.";
                                                                                                                                                                                                                en W., Klenk H.D.
cells by the Avi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 92;
                                                                                                                                                                                                                      Avian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lactobacillales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                      influenza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                      Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

```
RESULT
109×3p9
1D 201
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
10 001
1
                            RESULT
Q9X3Q0
                                                                                                                                                                                                                                                                                                                                                                                                                           日
                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PT PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                        Q9X3Q0
Q9X3Q0;
Q1-NOV-1999
01-NOV-1999
01-MAR-2002
STRAIN=3870;
STRAIN=3870;
MEDLINE=99013551; PubMed=9797205;
Gonzalez I., Georgiou M., Alcaide
                                                                                                                  Streptococcaceae; NCBI_TaxID=1303;
                                                                                                                                                        Streptococcus oralis. Bacteria; Firmicutes;
                                                                                                                                                                                                               DNA gyrase subunit A (Fragment).
                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                       GYRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=99013551; PubMed=9797205;
Gonzalez I., Georgiou M., Alcaide F., Balas D., Linares J.,
de la Campa A.G.;
"Fluoroquinolone resistance mutations in the parC, parE, and
genes of clinical isolates of viridans group streptococci.";
Antimicrob. Agents Chemother. 42:2792-2798(1998).
EMBL; AFO79200; AAD23327.1; ...
HSSP; P09097; 1AB4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9X3P9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR002205; DNA_topoisoIV.
Pfam; PF00521; DNA_topoisoIV; 1.
ProDom; PD000742; DNA_topoisoIV; 1.
SMART; SM00434; TOP4c; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=3180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Streptococcus oralis.
Bacteria; Firmicutes; Bacillus/Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GYRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE;
NON_TER
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=1303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Streptococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                              26
                                                                                                                                                                                                                                                                                                                                                                                                                       88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                           NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                       NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                       91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PS00137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ထ
                                                                                                                                                                                                                                    9 (TrEMBLrel. 12, 0
9 (TrEMBLrel. 12, 1
2 (TrEMBLrel. 20, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          subunit A (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; llarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94
                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94
4 AA;
                                                                                                                                    Streptococcus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97
11192 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBTILASE_HIS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10010 MW;
                                                                                                                                                      Bacillus/Clostridium
                                                                                                                                                                                                                                    Last sequence up
                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23; I
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        275B405D7E6E1E25 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A4AEB028D4E2AFE1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                      Ή
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.
                    Balas
                                                                                                                                                                                                                                                                                                                   97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 13;
3.7e+02;
                                                                                                                                                                                                                                                                                                                   A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A
                                                                                                                                                      group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 group; Lactobacillales;
                  D.,
                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                  Linares
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                      Lactobacillales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    parE, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

```
RESULT
Q9WW51
ID Q9
AC Q9
DT 01
DT 0N
GN GY
                                                                                                                                                                                                                                                                                                                                                                                                                               ACOCCA POR PROPERTY OF SQUEEN 
                                                                                                                                                                                                                                                 뫄
                                                                                                                                                                                                                                                                                      Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
Q9X3Q1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RA RT RT RT RT DR DR DR DR DR DR FT FT SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 4
                                       Q9WW51;
Q9WW51;
01-NOV-1999 (
01-NOV-1999 (
01-MAR-2002 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro: IPRO02205: DNA_topoisoIV.
Pfam: PF00521: DNA_topoisoIV: 1.
ProDom: pD000742: DNA_topoisoIV: 1.
SMART: SM00434: TOP4c: 1.
NON_TER 97 97
SEQUENCE 97 AA; 11176 MW; 275B58
GYRA
                DNA gyrase
                                                                                                                                                                                                                                                                                                                                                                                                                                                   NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR002205; DNA_topoisoIV.
Pfam; PF00521; DNA_topoisoIV; 1.
ProDom; PD000742; DNA_topoisoIV; 1.
SMART; SM00434; TOP4c; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              de la Campa A.G.;
"Fluoroquinolone resistance mutations in the parc genes of clinical isolates of viridans group stre Antimicrob. Agents Chemother. 42:2792-2798(1998).
EMBL; AF079205; AAD23332.1;
HSSP; P09097; 1AB4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gonzalez I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Streptococcaceae;
NCBI_TaxID=28037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Streptococcus mitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1999 (TrEMBLrel. 12, Creation-1-1999 (TrEMBLrel. 12, Last 01-MAR-2002 (TrEMBLrel. 20, Last 01-MAR-2002 (TrEMBLrel.)
                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=99013551; PubMed=9797205; Gonzalez I., Georgiou M., Alcaide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9X3Q1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           de la Campa A.G.;
"Fluoroquinolone resistance mutations in the parC, parE, and genes of clinical isolates of viridans group streptococci.";
Antimicrob. Agents Chemother. 42:2792-2798(1998).
EMBL; AF079201; AAD23328.1; -.
HSSP; P09097; 1AB4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9x3Q1
                                                                                                                                                                                                                                              88 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27
                                                                                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                                                                                                                                                                                                                                                                                                                      4;
                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FROM N.A.
                                                                                                                                                                                                                                              91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Firmicutes; Bacillus/Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91
                    subunit A
                                                                                                                                                                                                                                                                                                                                                                                                                               97
                              (TIEMBLrel. 12, Created)
(TIEMBLrel. 12, Last sequence update)
(TIEMBLrel. 20, Last annotation update)
                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                          AA;
                                                                                                                                                                                                                                                                                                                                                                                                                        97
11115 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Streptococcus.
                (Fragment).
                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                           Score 23; DB 2;
Pred. No. 3.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 23; DB
Pred. No. 3.9
0; Mismatches
                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                        661A4CA6DC66B380 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      275B58E6DD76A586 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ,
H
                                                                                                                               97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Balas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97
                                                                                                                             A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .9e+02;
s 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    group; Lactobacillales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           parC, parE, and streptococci.";
                                                                                                                                                                                                                                                                                                                                                                            Length 97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 97;
                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gyrA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
```

```
RESULT
OCCUPANTS
ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R Pfam; PF00521; DNA_topoisoIV.
R ProDom; PD000742; DNA_topoisoIV; 1.
R ProDom; PD000742; DNA_topoisoIV; 1.
SMART; SM00434; TOP4c; 1.
NON_TER 1
NON_TER 07
                                    Query Match
Best Local s
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                          "Fluoroquinolone resistance mutations in the parC, parE of clinical isolates of viridans group Streptococci."; Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases. EMBL; AF079199; AAD23326.1; -. EMBL; AF079198; AAD23325.1; -. EMBL; AF079198; AAD23325.1; -. EMBL; P09097; IAB4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9WW50 PRELIMINARY; PRT; 97 AA. Q9WW50; O1-NOV-1999 (TrEMBLrel. 12, Created) O1-NOV-1999 (TrEMBLrel. 12, Last sequence update) O1-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN-ATCC 10557, AND NCTC 11427;
Conzalez I., Georgiou M., Alcaide F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GYRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; PU9U9; LADW.
InterPro; IPR002205; DNA_topoisoIV.
Pfam; PF00521; DNA_topoisoIV; 1.
ProDom; PD000742; DNA_topoisoIV; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00434; TOP4c;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gonzalez I., Geo
de la Campa A.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM .... STRAIN-888, NCTC 12261, 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Streptococcaceae; NCBI_TaxID=28037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=1303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bacteria; Firmicutes;
Streptococcaceae; Stre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Streptococcus oralis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Streptococcus mitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
  1 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gyrase subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NYDA
                                    Similarity
4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Firmicutes;
                                                                                                                  97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97 AA;
                                    100.0%;
llarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
larity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97
                                                                                                                  A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
                                                                                                                  11115 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11115 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bacillus/Clostridium group; Lactobacillales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        M., Alcaide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacillus/Clostridium group; Lactobacillales;
                                                                        .0%;
                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                      Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23; I
Pred. No. 3
                                                                                                                275B48F7DC66B487 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          275B48F7DC66B487 CRC64;
                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          718,
le F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AND 72
Balas
                                                                                                                                                                                                                                                                                                                                                                                  Balas D.,
                                                      3.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                          DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720;
as D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                                      Length 97;
                                                                                                                                                                                                                                                                                                                                                                                    Linares
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Linares
                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                    ٦.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                    0;
                                                                                                                                                                                                                                                                                                                                              gyrA genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gyrA genes
                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

```
A CONTRACTOR OF THE CONTRACTOR
        ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q8Y3W8
Q8Y3W8;
Q8Y3W8;
Q8Y3W8;
O1-MAR-2002 (TremBLrel. 2:
O1-MAR-2002 (TremBLrel. 2:
O1-MAR-2002 (TremBLrel. 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q927D0
Q927D0;
Q1-DEC-2001
Q1-DEC-2001
Q1-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glaser P., Frangeul L., Buchrieser C., Rusniok C., Amend A.,
Baquero F., Berche P., Bloecker H., Brandt P., Chakraborty T.,
Charbit A., Chetouani F., Couve E., de Daruvar A., Dehoux P.,
Domann E., Dominguez-Bernal G., Duchaud E., Durant L., Dussurget O.,
Entian K.-D., Fsihi H., Garcia-del Portillo F., Garrido P.,
Gautier L., Geobel W., Gomez-Lopez N., Hain T., Hauf J., Jackson D.,
Jones L.-M., Kaerst U., Kreft J., Kuhn M., Kunst F., Kurapkat G.,
Madueno E., Maitournam A., Mata Vicente J., Ng E., Nedjari H.,
Nordsiek G., Novella S., de Pablos B., Perez-Diaz J.-C., Purcell R.,
Remmel B., Rose M., Schlueter T., Simoes N., Tierrez A.,
Vazquez-Boland J.-A., Voss H., Wehland J., Cossart P.;
"Comparative genomics of Listeria species.";
Glaser P., Frangeul L., Buchrieser C., Rusniok C., Amend A., Baquero F., Berche P., Bloecker H., Brandt P., Chakraborty T., Charbit A., Chetouani F., Couve E., de Daruvar A., Dehoux P., Domann E., Dominguez-Bernal G., Duchaud E., Durant L., Dussurget Entian K.-D., Fshhi H., Garcia-del Portillo F., Garrido P., Gautier L., Goebel W., Gomez-Lopez N., Hain T., Hauf J., Jackson Jones L.-M., Kaerst U., Kreft J., Kuhn M., Kunst F., Kurapkat G., Madueno E., Maitournam A., Mata Vicente J., Ng E., Nedjari H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ListiList; LIN02859; -. Hypothetical protein; Complete SEQUENCE 100 AA; 11061 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
STRAIN-CLIP 11262
                                                                                                                                                                                                                   STRAIN=EGD-E / SEROVAR 1/2A;
MEDLINE=21537279; PubMed=11679669;
                                                                                                                                                                                                                                                                                                                                                                              Listeria monocytogenes
Bacteria; Firmicutes; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hypothetical LIN2859.
                                                                                                                                                                                                                                            STRAIN-EGD-E
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Science 294:849-852(2001).
EMBL; AL596173; CAC98085.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=11679669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacteria; Firmicutes; B
Listeriaceae; Listeria.
                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=1639;
                                                                                                                                                                                                                                                                                                                                                        listeriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Listeria innocua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  h 100.0%;
Similarity 100.0%;
4; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrembLrel. 19, C. (TrembLrel. 19, L. (TrembLrel. 20, L. (TrembLrel. 20, L. ) protein lin2859.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                        Listeria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEROVAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                            el. 20, Created)
el. 20, Last sequence update)
el. 20, Last annotation update)
lmo2711.
                                                                                                                                                                                                                                                                                                                                                                                 Bacillus/Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bacillus/Clostridium group; Bacillales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 23; DB 16
Pred. No. 4e+02;
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proteome.
283AB69995C3E2F6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                              group; Bacillales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                       .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA ACCOMPAGNA 
                                                                                                                                                                  RA Simpson A.J.G., Reinach F.C., Arruda P., Abreu F.A., Acencio M.,
RA Alvarenga R., Alves L.M.C., Araya J.E., Baia G.S., Baptista C.S.,
RA Barros M.H., Bonaccorsi E.D., Bordin S., Bove J.M., Briones M.R.S.,
RA Bueno M.R.P., Camargo A.A., Camargo L.E.A., Carrer H.,
RA Colauto N.B., Colombo C., Costa F.F., Costa M.C.R., Costa N.R.S.,
RA Colauto N.B., Cristofani M., Dias Neto E., Docena C., El-Dorry H.,
RA Fraciancani A.P., Ferreira A.J.S., Ferreira V.C.A., Ferro J.A.,
RA Fraga J.S., Franca S.C., Franco M.C., Frohme M., Furlan L.R.,
RA Granier M., Goldman G.H., Goldman M.H.S., Gomes S.L., Gruber A.,
RA Krieger J.E., Kuramae E.E., Laigret F., Lambais M.R., Leite L.C.C.,
RA Lemos E.G.M., Lemos M.V.F., Lopes S.A., Lopes C.R., Machado J.A.,
RA Marques M.V., Martins E.A.L., Martins E.M.F., Matsukuma A.Y.,
RA Marques M.V., Martins E.A.L., Martins E.M.F., Matsukuma A.Y.,
RA Marques M.V., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,
RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,
RA de Oliveira M.C., de Oliveira R.C., Palmieri D.A., Paris A.,
Periota B.R., Roberto P.G., Santelli R.V., Sawasaki H.E.,
RA de Rosa V.E. Jr., de Sa R.G., Santelli R.V., Sawasaki H.E.,
RA de Rosa V.E. Jr., de Sa R.G., Santelli R.V., Sawasaki H.E.,
RA de Souza A.P., Terenzi M.F., Truffi D., Tsai S.M., Tsuhako M.H.,
RA de Souza A.P., Terenzi M.F., Truffi D., Tsai S.M., Tsuhako M.H.,
RA de Souza A.P., Terenzi M.F., Truffi D., Tsai S.M., Tsuhako M.H.,
RA Cago M.A., Zatz M., Meidanis J., Setubal J.C.;
"The genome sequence of the plant pathogen Xylella fastidiosa.";
DR EMBL, AE003851; AAF85587.1;
DR InterPro; IPR000897; SRP54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
Q9PHI7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                              InterPro; IPR000897;
PROSITE; PS00300; SRP
Hypothetical protein;
SEQUENCE 108 AA; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9PH17
Q9PH17;
01-OCT-2000
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=20365717;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plasmid pxF51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Xylella fastidiosa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hypothetical XFA0018.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hypothetical SEQUENCE 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vazquez-Boland J.-A., Voss H., Weh "Comparative genomics of Listeria Science 294:849-852(2001).
EMBL; AL591984; CAD00924.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nordsiek G.
Remmel B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=2371;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ListiList; LMO02711; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31 NYDA 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              K G., Rose)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ) (TremBLrel. 15, C:
) (TremBLrel. 15, La
2 (TremBLrel. 20, La
al protein Xfa0018.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            l protein; Complete
106 AA; 11714 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                         protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .
.
                                                                                                                                  97; SRP54.
SRP54; UNKNOWN_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=10910347;
                                                                              1; Complete 12462 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a S., de Pablos B., Perez-Diaz J.-C., Schlueter T., Simoes N., Tierrez A., Voss H., Wehland J., Cossart P.; cs_of_Listeria species.";
     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
  Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
Pred.
                                                                           proteome.
2F9ABC176A1DDE1B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            proteome.
40175118A239A833 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       108
  DB 16;
4.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xanthomonas group;
                                                                              CRC64;
                     Length 108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Purcell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

```
RESULT
OPNOTE
ID 090
ID 090
PT 001
PT
RESULT 34
Q9XSG7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q_{\underline{Y}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9xsG7;
Q9xsG7;
01-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9XUI9
Q9XUI9;
01-NOV-1999
01-NOV-1999
             PRINTS; PR00306;
ProDom; PD002112;
SMART; SM00197; S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_proteins; 1.
                                                                                                      SIMILARITY).
-!- SIMILARITY: BELONGS TO EMBL; AF136718; AAD24489.1;
                                                                                                                                                                                                                                                         Ohno K.,
                                                                                                                                                                                                                                                                                                                          Felis silvestris catus (Cat).
Eukaryota; Metazoa; Chordata; Craniata; Ve
Mammalia; Eutheria; Carnivora; Fissipedia;
                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1999 (TrEMBLrel. 01-DEC-2001 (TrEMBLrel. Serum amyloid A protein
                                                                                                                                                            -1- FUNCTION: MAJOR ACUTE PHASE REACTANT.
COMPLEX (BY SIMILARITY).
-1- TISSUE SPECIFICITY: PLASMA, SYNTHESIZI
                                                                                                                                                                                                                    Ohno K., Terado M., Iwata H.,
"Expression of recombinant fe
J. Vet. Med. Sci. 0:0-0(1999)
                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9685;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HOHE!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-99069613;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Nemata
Rhabditidae; Peloderinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZC334.1 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genome sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           79 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NYDA
                                                  PR00306; SERUMAMYLOID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (NOV-1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N.A.
             SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of the
                              Serum_amyloid_A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nematoda;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                       12,
12,
                                                                                                                                                                                                                                                                                                                                                                                                      (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nematode
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12,
12,
19,
                                                                                                                       THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      oda; Chromadorea;
Caenorhabditis.
                                                                                                                                                                                                                                     feline
                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 23;
Pred! No.
                                                                                                                                                                                                                                                       Inokuma
                                                                                                                         SAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1F52C1593A7EA1F0 CRC64;
                                                                                                                                                            SYNTHESIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence update)
                                                                                                                                                                                                                                   kuma H
serum
                                                                                                                         FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                elegans: A platform for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.4e+02;
hes 0;
                                                                                                                                                                                                                                                                                                                              Vertebrata;
ia; Felidae;
                                                                                                                                                                                                                                   amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                 APOLIPOPROTEIN OF
                                                                                                                                                                                                                                                       Onishi T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rhabditida; Rhabditoidea;
                                                                                                                                                            ВУ
                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                          THE LIVER
                                                                                                                                                                                                                                   A (SAA) protein.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                              Euteleostomi;
Felis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                 HDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
P88807
AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp AC pp
      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                    Q92B39
Q92B39;
Q1-DEC-2001
Q1-DEC-2001
Q1-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P88807;
01-MAY-1997
01-MAY-1997
01-DEC-2001
Glaser P., Frangeul L., Buchrieser C., Rusniok C., Amend A.,
Baquero F., Berche P., Bloecker H., Brandt P., Chakraborty T.,
Baquero F., Berche P., Bloecker H., Brandt P., Chakraborty T.,
Chatvit A., Chetouani F., Couve E., de Daruvar A., Dehoux P.,
Domann E., Dominguez Bernal G., Duchaud E., Durant L., Dussurget O.,
Entian K.-D., Fsihi H., Garcia-del Portillo F., Garrido P.,
Gautter L., Goobel W., Gomez-Lopez N., Hain T., Hauf J., Jackson D.,
Jones L.-M., Kaerst U., Kreft J., Kuhn M., Kunst F., Kurapkat G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bens G., Pfister H., Wieland U.;
"Human papillomavirus DNA in non-melanoma skin cancers of transplant recipient.";
Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases SEMBL, U85663, AAB61648.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-1997 (TrEMBLrel.
01-MAY-1997 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
Major capsid protein L1
                                                                                                                                                    SEQUENCE FROM N.A. STRAIN-CLIP 11262 Pubmed-11679669;
                                                                                                                                                                                                                                      NCBI_TaxID=1642;
                                                                                                                                                                                                                                                              Bacteria; Firmicutes;
Listeriaceae; Listeri
                                                                                                                                                                                                                                                                                                         Listeria innocua
                                                                                                                                                                                                                                                                                                                               Hypothetical LIN1712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR002210; PV_capsid_L1.
Pfam; PF00500; late_protein_L1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10566;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human papillomavirus.
Viruses; dsDNA viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P88807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Acute phase;
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bens G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PD000544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     112
112 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            111
                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel. (TrEMBLrel. )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
llarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Amyloid;
                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                            Listeria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               late_protein_L1; 1.
44; PV_capsid_L1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA;
                                                                                                                                                                        SEROVAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12547 MW;
                                                                                                                                                                                                                                                                                                                                              cel. 19, C:
cel. 19, L:
cel. 20, L:
lin1712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12730 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HDL;
                                                                                                                                                                                                                                                                                  Bacillus/Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03,
19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plasma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RNA stage; Papillomaviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence up
                                                                                                                                                                          6A;
                                                                                                                                                                                                                                                                                                                                                                    Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 23; I
Pred. No. 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D9392BD358AF5D22 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FF5F93248B4A3C01 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                         112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .5e+02;
                                                                                                                                                                                                                                                                              group; Bacillales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
RESULT
P79900
밁
                                                                                                                                                                                     ALD DATE OF THE COLOR OF THE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P79900
P79900;
01-MAY-1997
                                                                                                                                                                                  CHAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAY-1997 (TrEMBLrel. 03, Created)
01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Serum amyloid A protein precursor (Fragment).
0ncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
0ncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleoste
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
                                                                                                                                                                                                                                                                                                                                                                                          -!- SIMILARITY: BELONGS TO THE EMBL; X99387; CAA67766.1; -. InterPro; IPR00096; Serum_an Pfam; PF00277; SAA_proteins;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nordsiek G., Novella S., de Pablos B., Perez-Diaz J.-C., Remmel B., Rose M., Schlueter T., Simoes N., Tierrez A., Vazquez-Boland J.-A., Voss H., Wehland J., Cossart P.;
                                                                                                                                                                                                                                                                                                                         PRINTS; PR00306; SERUMAMYLOID.
ProDom; PD002112; Serum_amyloid_A;
SMART; SM00197; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Acute phase pr
phase response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hypothetical protein; SEQUENCE 112 AA; 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Comparative genomics of Listeria Science 294:849-852(2001).
EMBL: AL596169; CAC96943.1; -.
                                                                                                                                                                                                                              SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPLEX (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-97131713; PubMed-8977214; Jensen L.E., Hiney M.P., Shields D.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Madueno E., Maitournam A., Mata Vicente Nordsiek G., Novella S., de Pablos B., F
                                                                                                                                                                                                                                                                           Acute phase; Amyloid;
                                                                                                                                                                                                                                                                                                 PROSITE; PS00992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- FUNCTION: MAJOR ACUTE PHASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Whitehead A.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=8022;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ListiList; LIN01712; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37
51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NYDA 4
                                           1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NYDA
NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             phase proteins
                                                                                    n 100.0%;
Similarity 100.0%;
4; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32
54
                                                                                                                                                                                     114 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  158:384-392(1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                          22
                                                                                                                                                                                                                                                                                                 SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 n; Complete
12344 MW;
                                                                                                                                                                                     12693
                                                                                                                                                                                                                                                                                                                                                                                                                     Serum_amyloid_A.
                                                                                                                                                                                                                                                                           HDL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in Salmonids.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PLASMA,
                                                                                                                                                                                     MW;
                                                                                                                                                                                                                                                                           Plasma; Signal.
                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 23; DB
Pred. No. 4.5
); Mismatches
                                                                                                                                                                                ACUTE PHASE SERUM AMYLOID A (SAA). 02D96C6F2ABE232C CRC64;
                                                                                                          Score 23;
Pred. No.
                                                                                                                                                                                                                                POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proteome.
C63273F88BF9450C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SYNTHESIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REACTANT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                species.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Evolutionary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Uhlar C.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 16;
. 4.5e+02;
                                                                                      4.6e+02;
                                                                                                                                  DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APOLIPOPROTEIN OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ¥Υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      iaz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             analyses and acute
                                                                                                                               Length 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lindsey A.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LIVER (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nedjari H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                         0,:
                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                         0
```

Q8RLF6

Q8RLF6;

PRELIMINARY;

PRT;

120

æ

RESULT AC AC

38

```
OC P1
                                                                                                                                                                                                                                                                                                                                                                                                                               QBRIZZ
ID QBRIZZ
ID QBRIZ
AC QBRIZ
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-JU
DT 101-JU
DT 101-
                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bradyrhizobium japonicum resu
soybean nodules.";
Submitted (MAR-2002) to the E
EMBL; AY081839; AAM12360.1; -
NON_TER 120
SEOUENCE 120
                                                             09V8Y8 PRELI

09V8Y8;

01-MAY-2000 (Trem

01-MAY-2000 (Trem

01-JUN-2002 (Trem

CG13873;

0G13873;
                       Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Trac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08R1Z2;
01-JUN-2002 (TrEMBLrel. 21, Cr
01-JUN-2002 (TrEMBLrel. 21, La
01-JUN-2002 (TrEMBLrel. 21, La
Hypothetical 13.1 kDa protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2002
01-JUN-2002
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strausberg R.;
Submitted (FEB-2002) to the EMBL; BC022724; AAH22724.1;
Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-EYE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q8R1Z2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bradyrhizobium
NCBI_TaxID=375;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bradyrhizobium japonicum. Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN-USDA110SPC4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mueller P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                 1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     otheticar ___ musculus (Mouse).
mryota; Metazoa; Chordata;
"Tryota; Metazoa; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TnKPK2 insertion in
                                                                                                                                                                                                                                                                             NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NYDA 66
                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                               23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                   (TrEMBLrel.) (TrEMBLrel.) (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                               120 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                 100.0%; ilarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                             13077 MW;
   Endopterygota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13449 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ria; alpha subdivision; Rhizobiaceae group;
Bradyrhizobium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21, Created)
21, Last sequence update)
21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21,
21,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               virG-like transcritional results in the formation
                                                                                           Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                 Score 23; DB
Pred. No. 4.9
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Veri
Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                           CD72B2A353596525 CRC64;
 Tracheata; Hexapoda; Inso
ota; Diptera; Brachycera;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F71F579B698A94A7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence update)
Diptera;
                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vertebrata; Euteleostomi;
thi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.9e+02;
                                                                                                                                                                             AΑ
                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                   .9e+02;
                                                                                                                                                                                                                                                                                                                                                                                       11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 120;
                                                                                                                                                                                                                                                                                                                                                                                   Length 120;
                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               regulator of poorly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                       Insecta;
 Muscomorpha;
                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of
infected
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

```
RESULT
Q16834
     B
                                                                                                                                                                                                                                                                                         Ωy
                                                                                                                                                                                                                                                                                                                                                                         RX MEDLING-ZOLOGOS; PubMed-10731132;

RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Jang Q., Chen L.X.
RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Ballew R.M., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Abril J.F., Aghayni A., An H.-J., Indicess Pfennkoch C., Baldwin D.,
RA Bellew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bandari D., Bolshakov S.,
RA Berker G., Golden R.R., Bouck J., Brokstein P., Brottier P.,
RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA Dodson K., Doup L.E., Downes M., Dugan Rocha S., Eleischmann W.,
RA Durbin K.J., Evengelista C.C., Ferriez C., Ferrieza S., Floischmann W.,
RA Durbin K.J., Evengelista C.C., Ferrieza C., Ferrieza S., Floischmann W.,
RA Harris M.L., Harvey D., Helman T.J., Hernandez J.R., Houck J.,
RA Harris M.L., Harvey D., Helman T.J., Hernandez J.R., Houck J.,
RA Harris M.L., Harvey D., Helman T.J., Hernandez J.R., Houck J.,
RA Kimmel B.E., Kodira C.D., Kraft C.J., Kravitz S., Kulp D., Lai Z.,
RA Kimmel B.E., Kodira C.D., Kraft C.J., Kravitz S., Kulp D., Lai Z.,
RA McInlux M., Maltshina N.V., Mobarry C., McDerson D.M., Nelson L.R.,
RA Nelson D.R., Nelson K.A., Nison K., Nison K., Nison K., Strong R., Sun E., Sthen H.,
RA Shue B.C., Siden Kiamos I., Simpson M., Strong R., Sun E., Wang A.H., Wang X.,
RA Reinert K., Remington K., Sunders R.D., Schel M.P., Shun Y., Reese M.G.,
RA Reinert K., Remington N., Sunders R., Wenter E., Wang A.H., Wang X.,
RA Palescolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Reinert K., Bassarman D.A., Weinstock G.M., Weissenbach J.,
RA Shue B.C., Siden K. Shord W., Stong R., Sun E.,
RA Shue B.C., Stong R., Sun E., Wang A.H., W
                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 4
                                                                                                            Q16834;
Q16834;
Q1-NOV-1996
Q1-NOV-1996
Q1-DEC-2001
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
NCBI_TaxID=9606;
[1]
                                                                              Serum amyloid A
SAAB1 BETA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. STRAIN-BERKELEY;
                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                            <u>_</u>
                                                                                                                                                                                                                                                                               NYDA 4
                                                                                                                                                                                                                                                             NYDA
                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                              7
                                                                                                              (TrEMBLrel.
                                                                                                                                           (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                              PRELIMINARY;
                                                                                               protein
                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                              01,
01,
19,
                                                                                             precursor.
                                                                                                              Last
Last
                                                                                                                                           Created,
                                                                                                                                                                                                                                                                                                                         0;
                               Craniata; Vi
Catarrhini;
                                                                                                                                                                                                                                                                                                                     Score 23; DB 5;
Pred. No. 4.9e+02;
Mismatches 0;
                                                                                                                                                                            PRT;
                                                                                                              annotation
                                                                                                                             sequence
                                                                                                                                                                            122
                              Vertebrata; Euteleostomi; i; Hominidae; Homo.
                                                                                                                                                                            A
                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                     Length 121;
                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                     0;
```

```
RESULT 42
Q16730
                                SOUTH BEAR STANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 4
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                   Q16730
Q16730;
Q1-NOV-1996
Q1-NOV-1996
Q1-DEC-2001
                                                                                                                                                                                                                                                                                          SAAZ.
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Eukaryota; Metazoa; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           evolution and expression in hepatoma cells.";
Scand. J. Immunol. 34:471-482(1991).
-i- FUNCTION: MAJOR ACUTE PHASE REACTANT. APOLIPOPROTEIN
                               SEQUENCE
                                                    SIGNAL
                                                                                PRINTS; PR00306; SERUMAMYLOID. ProDom; PD002112; Serum_amyloismarT; SM00197; SAA; 1.
                                                                                                                InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_proteins; 1.
                                                                                                                                                                                                  proteins in one person
J. Clin. Invest. 82:16
                                                                                                                                                                                                                                                                                                                                          Serum amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00992; SAA; 1.
Acute phase; Amyloid; HDL; Plasma; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART; SM00197; SAA; 1.
PROSITE; PS00992; SAA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS; PR00306; SERUMAMYLOID. ProDom; PD002112; Serum_amyloi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_proteins; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -1- SIMILARITY: BELONGS TO THE SAA EMBL; X56652; CAA39974.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=92022342; PubMed=1656519;
Betts J.C., Edbrooke M.R., Thakker R.V., Woo
"The human acute-phase serum amyloid A gene f
                                                                         PROSITE; PS00992;
                                                                                                                                      EMBL; M23700; AAA64801.1;
                                                                                                                                         SIMILARITY). BELONGS TO THE SAA FAMILY
                                                                                                                                                                                                                       "Human serum amyloid A.
                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         +
                                                                                                                                                                   -!- TISSUE SPECIFICITY: PLASMA,
                                                                                                                                                                                         <del>-</del>
                                                                                                                                                                                                                                           MEDLINE=89034862; PubMed=3183061;
                                                                                                                                                                                                                                                                                      NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-LIVER
                                                            cute phase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  59 NYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE SPECIFICITY: PLASMA, SYNTHESIZED
                                                                                                                                                                                        FUNCTION: MAJOR ACUTE PHASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY).
                                                                                                                                                                               COMPLEX (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPLEX (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  62
                               122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122 AA;
                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                       (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                            Amyloid; HDL; Plasma; Signal.
                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Z.A.
                                                                                                                                                                                                                                                                                                                                         A protein
                               ĀΑ;
                                                                                                                                                                                                  82:1670-1675(1988)
                                                                        SAA; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Serum_amyloid_A;
                              122
13527 MW;
                                                                                            Serum_amyloid_A;
                                                                                                                                                                                                                       Dwulet F.E., Benson M.D. d A. Three hepatic mRNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13532 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                   01,
19,
                                                                                                                                                                                                                                                                                                                                         precursor
                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                        Created)
                              SERUM AMYLOID A2-BETA; C4AAB684E0EDCBB8 CRO
                                                   POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 23;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        POTENTIAL.
Score
Pred.
                                                                                                                                                                                                                                                                                              Craniata; Vo
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   D913BF06AA4107A2 CRC64;
                                                                                                                                                                    SYNTHESIZED
                                                                                                                                                                                      REACTANT. APOLIPOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FAMILY
No.
                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5e+02;
DB 4;
5e+02;
                                                                                                                                                                                                                                                                                                          Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                             ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 4;
                                                                                                                                                                                                                                                                                                 Hominidae;
                                                                                                                                                                                                                       and
                                                                                                                                                                    ВY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HHE
                                                                                                                                                                    THE LIVER
                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 122;
         Length 122;
                              CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LIVER
                                                                                                                                                                                                                       corresponding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             structure,
                                                                                                                                                                    (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (BY
                                                                                                                                                                                       OF THE HDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
RESULT
OF ON THE PROPERTY OF T
                            A LO CONTRA PROPERTOR OF C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9GSP8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-DEC-2001
01-DEC-2001
01-MAR-2002
         Acute phase; Amyloid; H
SEQUENCE 122 Ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR000096; Serum_amyloid_A.
Pfam; PF00277; SAA_proteins; 1.
ProDom; PD002112; Serum_amyloid_A; 1.
PROSITE; PS00992; SAA; UNKNOWN_1.
SEQUENCE 122 AA; 13533 MW; 43A57D
                                                                                PRINTS; PR00306; SERUMANYLOID
PRODOM; PD002112; Serum_amyloi
SMART; SM00197; SAA; 1.
PROSITE; PS00992; SAA; 1.
                                                                                                                                                                                                                                                                                                                                                   -!- SIMILARITY: BELONGS TO THE SAA FAMILY EMBL; AF300706; AAG24633.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAR-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (APR-2001) to the EMBL; BC007022; AAH07022.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Serum amyloid Al.
Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q96QN0
                                                                                                                                                                                                 InterPro; IPR000096; Serum_amyloid_A. Pfam; PF00277; SAA_proteins; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Garcia-Arraras J.E.;
"Holothuroid serum amyloid A protein.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Holothuria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Holothuroidea; Aspidochirotacea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Holothuria glaberrima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Serum amyloid A protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9GSP8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9GSP8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=LIVER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=31192;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      59 NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
les 4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ц
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NYDA 4
                                                                                                                                                                                                                                                                                                                             SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NYDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel. 16, (TrEMBLrel. 16, (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                            Serum_amyloid_A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Primates;
                            13580 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Echinodermata; Eleutherozoa; Echinozoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                 to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Roig-Lopez J.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19,
19,
20,
Plasma.
ww; 740fCE6C8661fD8B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 23; DB Pred. No. 5e+
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43A57D56B371DC13
                                                                                                                                                                                                                                                                                                                                                         SYNTHESIZED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aspidochirotida; Holothuriidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Santiago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             update)
                                                                                                                                                                                                                                                                                                                                                         ΥВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                         THE LIVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ...
                                                                                                                                                                                                                                                                                                                                                         (BY
                                                                                                                                                                                                                                                                                                                                                                                                                    OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
RESULT 45

Q29514

ID Q2951

AC Q2951

AC Q2951

DT 01-NC

DT 01-NC

DT 01-NC

DT 01-NC

DT 01-NC

OC Euka

OC Euka

OC Mamm

OX MED

RA MED

RA RAY

RY enc

CC -1

CC -1

CC -1

CC -1

DR EP

DR EP

DR EP

DR EP

DR P

DR
Search completed: February Job time: 23.3333 secs
                                                                                                                                                        Вb
                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: BELONGS TO THE SAA FAMILY.

-!- SIMILARITY: BELONGS TO THE SAA FAMILY.

R EMBL, X58728, CAA41560.1; -.

R InterPro; IPR000096; Serum_amyloid_A.

Pfam; PF00277; SAA_proteins; 1.

R Pfam; PF00277; SAA_proteins; 1.

R PFINYS; PR00306; SERUMAMYLOID.

R PROMS; PD002112; Serum_amyloid_A; 1.

R ProDom; PD002112; Serum_amyloid_A; 1.

R PROSTITE; PS00992; SAA; 1.

R PROSTITE; PS00992; SAA; 1.

R Acute phase; Amyloid; HDL; Hypothetical protein; Plasma.

W Acute phase; Amyloid; HDL; Hypothetical protein; Plasma.

SEQUENCE 122 AA; 13509 MW; B635BEB222907945 CRC64;
                                                                                                                                                                                                                                                                                 Query Match 100.0%; Score 23; DB 6; Length 122; Best Local Similarity 100.0%; Pred. No. 5e+02; Matches 4; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q29514 PRELIMINARY; PRT; 122 AA.
Q29514;
O1-NOV-1996 (TrEMBLrel. 01, Created)
O1-NOV-1996 (TrEMBLrel. 01, Last sequence update)
O1-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Putative serum amyloid A protein.
Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
(1)
CTANID-9986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.

MEDLINE=91315474; PubMed=1859410;

Ray B.K., Ray A.,

Ray B.K., Ray A.,

"MoLecular cloning and nucleotide sequence of complementary DNA encoding rabbit alpha 1-acid glycoprotein.";

Biochem. Biophys. Res. Commun. 178:507-513(1991).

-i- FUNCTION: MAJOR ACUTE PHASE REACTANT. APOLIPOPROTEIN OF THE HDL COMPLEX (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NYDA 4
||||
58 NYDA 61
                                                                                                                                                    59 NYDA 62
                                                                                                                                                                                                                          1 NYDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    h 100.0%;
Similarity 100.0%;
4; Conservative 0
                                   δ
                               2003, 11:22:02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 23; DB 5; Length 122;
Pred. No. 5e+02;
D; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

```
A Geneseq_101002:*

1: /SIDS2/gcgdata/ge
2: /SIDS2/gcgdata/g
3: /SIDS2/gcgdata/g
3: /SIDS2/gcgdata/g
4: /SIDS2/gcgdata/
5: /SIDS2/gcgdat
6: /SIDS2/gcgdat
7: /SIDS2/gcgdat
8: /SIDS2/gcgdat
9: /SIDS2/gcgdat
9: /SIDS2/gcgdat
11: /SIDS2/gcgdat
12: /SIDS2/gcgdat
13: /SIDS2/gcgdat
14: /SIDS2/gcgdat
15: /SIDS2/gcgdat
16: /SIDS2/gcgdat
17: /SIDS2/gcgdat
18: /SIDS2/gcgdat
19: /S
                                                                                                                                                                                                                                                                                                                                                                                           Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 1008
Maximum Match 1008
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being p
                                                                                                                                                                                                                                                                                                                                                                                           Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            re greater than or equal to the score is derived by analysis of the total
       200220
   100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
                                                                                                                                                                                                                                                                                                                                                                                    %
Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT943-6
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                908470 segs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           February 6, 2003, 11:16:00; Search time 27.8333 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 nlda 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    // SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*
// SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
// SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1982.DAT:*
// SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
// SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
// SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1985.DAT:*
// SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1986.DAT:*
// SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1987.DAT:*
// SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1989.DAT:*
// SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1989.DAT:*
// SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
// SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1991.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.3
Copyright (c) 1993 - 2003 Compugen
                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   133250620 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                           日
AAE06901

AAU07630

AAU07229

ABB06547

AAW00415

AAW08217

AAW08217

AAW33751

AAX33751

AAB47261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (without alignments)
19.150 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ltd
                                                                                              Human amyloid prec
Asp2 recognition s
Human beta-amyloid
Beta-secretase rel
Interleukin-6 anta
Swedish double mut
APP Swedish double
                                                                                                                                                                                                                                                                                                                                                                                    Description
Swedish mutant bet
Swedish mutation A
Beta secretase cle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             printed,
```

														_
X PI	PA PA PA	X PR	PF	YY PD	Y PN	SO X	X X X X X X X X X X X X X X X X X X X	XX	XX XX	X A	RES AAE ID			
Bienkows	(BIEN/) (GURN/) (HEIN/) (PARO/) (YANR/)	09-маү-	09-MAY-	19-JUL-	wo200150829-	Homo s	Human; aspartyl peta-secretase; peta-secretase; peta-secretase; peta-secretary to neuroprotective;	Human	23-00	AAE06901;	RESULT 1 AAE06901 ID AAE06901		11111111111111111111111111111111111111	
)wski		7-2001;	7-2001;	L-2001	15082	sapiens	; asp secre fibri prote	amyloid	3-0CT-2001	901;	901 s		000000000000000000000000000000000000000	ა ა
MJ, C	BIENKOWSKI GURNEY M E HEINRIKSON PARODI L A YAN R.	1; 2001WO-		1.	9-A2.	ns.	artyl p tase; p tlary t llary t	oid pre	1 (fir		tandard;			
Gurney	KI M J. E. DN R L. A.	LWO-IB0079	2001WO-IB00799				oroteas Alzheim Langle; antise	ecursor	st entry)		1; peptide;		200 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	D
ME,		0799.	0799.				e 2; er's neur nse t	protein	ry)		ide;		222222222222222222222222222222222222222	
Heinrikson RL,							<pre>protease 2; Asp 2; beta-amyloid Alzheimer's disease; dementia; tangle; neuronal loss; amyloid- antisense therapy; APP-Sw; gen</pre>	ein (APP-Sw) beta-			4 AA.	ALIGNMENTS	AAE10651 AAE02613 ABE02613 ABE02613 ABE078294 AAB07874 AAB07894 AAB073297 AAB09903 ABB09003 ABB09003 ABB09599 AAM50897 AAB07589 AAW08362 AAW08362 AAW083756 AAW083756 AAW08362 AAW083756 AAW083756 AAW083756 AAW083756 AAW083756 AAW083756 AAW083756 AAW083756 AAW08627 AAW08627 AAW08627 AAW08627 AAW09491 AAW09491 ABW086425 AAW09491 ABW086425 AAW09491 AA	
Parodi LA, Y							loid precursor la; amyloid pl oid-beta pepti gene therapy.	ecretase					Hum Hum Hum Hum Hum Hum Flu Flu Sub Pro Pro Oli- Oli- Syn Syn Betr Syn Hum Hum Hum Hum Hum App Pew Pew Pew Pew Pew Asp Asp Asp App	Đ.
an R;							<pre>d precursor protein; amyloid plaque; gliosis; -beta peptide; nootropic; ne therapy.</pre>	peptide #2.					Human aspartyl pro Human Aspartyl pro Human Aspartyl pro Human beta secreta Fluorogenic proteas A peptide fragment Substrate for beta Protease indicator Peptide #1 used as Beta-secretase rel Oligopeptide subst Synthetic oligopep Beta-App alpha-sec Human APP-Sw beta- Peptide #2 used as Beta-secretase spe Human APP-Sw beta- Peptide #2 used as Beta-secretase spe Human APP Swedish	

×

```
RESULT 2
AAU06630
      DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid CC precursor proteal (APP) isoforms and their corresponding DNA molecules. Human aspartyl proteases can act as beta-secretase proteases useful for treating Alzhelmer's disease. APP isoforms are useful for identifying CC modulators of amyloid-beta peptide production, for use in designing therapeutics for the treatment and prevention of Alzhelmer's disease, cd dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis and neuronal loss. APP isoforms are also used in methods for identifying inhibitors and modulators of human Asp2 activity. The invention relates to a method for identifying agents that modulate the activity of human aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used as a means to screen in cellular assays for the inhibitors of beta- and CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in CC Hu-Asp nucleic acids in in vitro assays and in Northern and Southern CC blots. The present sequence is human amyloid precursor protein (APP-Sw) beta-secretase peptide related to the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
Novel purified polypeptide comprising fragment of mammalian aspartyl
                                  WPI; 2001-502549/55.
                                                               Bienkowski MJ,
                                                                                                                                                                                                                   09-MAY-2001;
                                                                                                                                                                                                                                                                                                                                       amyloid-beta; Abeta; APP-SW.
                                                                                                                                                                                                                                                                                                                                                  Aspartyl protease; Asp2; beta-secretase; nootropic; neuroprotective; amyloid protein precursor; APP; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel purified polypeptide comprising fragment of protease 2, lacking Asp2 transmembrane domain and secretase activity of Asp2 useful for identifying
                                                                                                                           (GURN/)
                                                                                                                                                                                    09-MAY-2001; 2001WO-IB00798
                                                                                                                                                                                                                                                 12-JUL-2001
                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                  Asp2 recognition site from APP-SW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU06630 standard; Peptide; 4 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-483072/52
                                                                                                                                                                                                                                                                             WO200149098-A2
                                                                                                                                                        (BIEN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NLDA
                                                                                                         ) GURNEY M E.
) HEINRIKSON R L.
) PARODI L A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
4; Conser
                                                                                                                                                       BIENKOWSKI M J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page 101; 185pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
llarity 100.0%;
Conservative
                                                                                                                                                                                                                   2001WO-IB00798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₽
¥
                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                              Gurney ME,
                                                              Heinrikson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 20; DE Pred. No. 7.8
0; Mismatches
                                                              RL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 22;
7.8e+05;
                                                              Parodi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mammalian aspartyl retaining beta inhibitors of Asp2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                              LA,
                                                              Yan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
RESULT 3
AAU07229
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APP or its fragment containing an APP cleavage site recognizable by a mammalian beta-secretase, and further comprising two lysine residues at the carboxyl terminus of the aminol acid sequence of the mammalian APP or APP fragment. Also included in the invention are methods of identifying modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are useful for treating Alzheimer's disease. APP is useful in methods for identifying inhibitors or modulators of human Asp2 activity and amyloid-beta (Abeta) peptide production. APP is also useful in designing therapeutics for the treatment or prevention of Alzheimer's disease. APP comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is associated with increased levels of Abeta processing is useful in assays relating the Alzheimer's research. The expression vector is useful for recombinantly expressing APP. Nucleic acids that hybridise to
 Bienkowski MJ,
                                                   (BIEN/)
(GURN/)
(HEIN/)
(PARO/)
                                                                                                                                      09-MAY-2001; 2001WO-IB00797
                                                                                                                                                                                                                                                                                                            aspartyl protease 2; Asp2; amyloid |p:
beta-secretase; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                        aspartyl
                                                                                                                                                                                                                                                                                                                                                                           Human beta-amyloid protein precursor, APP-beta secretase site peptide #2
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU07229;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU07229 standard; Peptide; 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a purified polypeptide comprising a fragment mammalian aspartyl protease (Asp)2 protein which lacks the Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide the fragment retain the beta-secretase activity of the mammalian Asp2 protein. The invention also details polynucleotides for the Asp proteins and vectors expressing them, and a polypeptide (isoform of amyloid protein precursor (APP)) comprising the amino acid sequence of amyloid protein precursor (APP))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protease 2, lacking Asp2 transmembrane domain and retaining beta secretase activity of Asp2 useful for identifying inhibitors of
                                                                                                                                                                       09-MAY-2001; 2001WO-IB00797.
                                                                                                                                                                                                           12-JUL-2001
                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                24-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Asp oligonucleotides are useful as probes or primers. The probes are useful for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and Southern blots. The present sequence is the App.
                                                                                                                                                                                                                                          WO200149097-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       beta-secretase peptide sequence from APP-SW, the Swedish mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NLDA
                              ) BIENKOWSKI M J.
); GURNEY M E.
) HEINRIKSON R L.
) PARODI L A.
) YAN R.
                                                                                                                                                                                                                                                                                                                                           aspartyl protease 1; Asp-1; nootropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      h 100.0%;
Similarity 100.0%;
4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 101;
                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA;
Gurney ME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 185pp;
                                                                                                                                                                                                                                                                                                                            amyloid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               English.
 Heinrikson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
Pred:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                             APP-beta.
RL,
                                                                                                                                                                                                                                                                                                                             precursor;
 Parodi LA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
 Yan
 æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fragment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Asp2
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein. Also included is an isoform of amyloid protein precursor (APP) comprising the amino acid sequence of a APP or its fragment containing an APP cleavage site recognisable by a mammalian beta-secretase, and further comprising two lysine residues at the carboxyl terminus of the amino acid sequence of the mammalian APP or APP fragment. The polypeptides are used for assaying for modulators of beta-secretase activity; identifying agents that inhibit the APP processing activity of Amp2 aspartyl protease (Hu-App2); identifying agents that modulate the activity of Asp2; and for reducing cellular production of amyloid beta (Abeta) from APP. Agents identified by the above methods are useful for treating Alzheimer's disease; and for identifying modulators of amyloid-beta (Abeta) peptide production, for use in designing therapeutics for the treatment or prevention of Alzheimer's disease. Probes and primers derived from Asp nucleic acids squences are useful for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and Southern blots. The present sequence represents the amino acid sequence of human amyloid protein precursor, APP-beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to a novel purified polypeptide comprising a fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide and the fragment retain the beta-secretase activity of the mammalian Asp2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel purified polypeptide comprising fragment of mammalian aspartyl protease 2, lacking Asp2 transmembrane domain and retaining beta secretase activity of Asp2 useful for identifying inhibitors of Asp2 activity
                                             19-JUL-2000;
12-MAR-2001;
                                                                                                                                  24-JAN-2002
                                                                                                                                                                                                    Synthetic
                                                                                                                                                                                                                                                                                  Beta-secretase; enzyme; cleavage site; amyloid
                                                                                                                                                                                                                                                                                                                       Beta-secretase
                                                                                                                                                                                                                                                                                                                                                        31-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                      ABB06547 standard; Peptide; 4 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              secretase site peptide substrate #2 used in assays of human secretase activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 129; Page 101; 185pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-502548/55
              (PHAA ) PHARMACIA & UPJOHN CO
                                                                                                19-JUL-2001;
                                                                                                                                                                 WO200206306-A2
                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NLDA 4
||||
1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 AA;
                                                                                                                                                                                                                                                  disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                             2000US-219795P.
2001US-275251P.
                                                                                                  2001WO-US23035
                                                                                                                                                                                                                                                                                                                     related
                                                                                                                                                                                                                                                                  neuroprotective; nootropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                     peptide SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 20; DB 22;
Pred. No. 7.8e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                     ID
                                                                                                                                                                                                                                                                                                                     NO:142.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                  protein precursor;
beta-secretase inh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Asp2 beta-
                                                                                                                                                                                                                                                                    inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                    APP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

```
AAW00415
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for conducting aspartyl protease assays. (I) has neuroprotective and nootropic activities, and can be used as an inhibitor of beta-secretase activity A beta-secretase modulator from the present invention can be used for inhibiting beta-secretase activity in vivo, and in the manufacture of a medicament for the treatment of Alzhaimer's disease. Pharmaceutical compositions from the present invention can be used for treating a disease or condition characterised by an abnormal beta-secretase activity. (I) is useful for identifying agents that modulate the activity of human Asp2 aspartyl protease (HI-Asp2). (I) is useful as a core structure to construct derivatives. ABL49914 to ABL49925 and ABB6409 to ABB06593 represent sequences used in the exemplification
                                                                                                                WPI; 1996-065476/07.
                                                                                                                                                                                                                                              JP07324097-A
                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                            IL-6; antagonist; autoimmune disease
                                                                                                                                                                                                                                                                                                                  Interleukin-6 antagonist peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present inv
sequence of at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel substrates for human aspartyl protease useful for identifying modulators of beta secretase activity of aspartyl protease for trea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Heinrikson
                                                                                                                                      (DAIL ) DAICEL CHEM IND (FUJI ) FUJISAWA PHARM (
                                                                                                                                                                          30-MAY-1994;
                                                                                                                                                                                                30-MAY-1994;
                                                                                                                                                                                                                       12-DEC-1995
                                                                                                                                                                                                                                                                                                                                          29-AUG-1996
                                                                                                                                                                                                                                                                                                                                                                  AAW00415;
                                                                                                                                                                                                                                                                                                                                                                                        AAW00415 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tomasselli AG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           least
                                                                                                                                                                          94JP-0117259
                                                                                                                                                                                                 94JP-0117259
                                                                                                                                                                                                                                                                                                                                                                                        peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          four amino acids, where the per
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              188pp; English.
                                                                                                                                        CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gurney ME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20; DB Pred. No. 7.8 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Emmons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7.8e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          eptide (I) comprising a the peptide is a substrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bienkowski MJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

0

New IL-6 antagonists are provided which are of formula X-W-Y, in which X is H or an amino-protecting group, Y is OH or a carboxy-protecting group, and W is a peptide containing all or part of the sequence as given in AAW00401, AAW00402, AAW00403 or AAW00404, where free mercapto groups in the sequence are optionally protected. The

any

Claims

6

Pages 2, 3; 19pp; Japanese

Interleukin 6 antagonist - useful for treating

auto:immune

```
RESULT 6
AAW08217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSCCC
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local s
Matches 4
                                                                                                   beta-amyloid precursor proteins (APP). These sequences are recognised by the enzyme of the invention. The enzyme of the invention is beta-secretase, and specifically cleaves beta-APP at one of these sites. Normal processing of beta-APP is thought to occur via cleavage between residues 16 and 17 of the beta-amyloid peptide region by an alpha-secretase. Pathogenic processing is thought to occur by beta-secretase cleavage of beta-APP. Beta-secretase activity can be detected and measured using a method of the invention, which detects at least one of the beta-secretase cleavage products formed on cleavage. The method can be used to determine whether a test substance inhibits proteolytic cleavage, by beta-secretase, of beta-APP. Compounds effective to at least partially inhibit beta-secretase activity can be used to
                                           Sequence
                                                              inhibit cleavage of beta-APP in cells or mammalian hosts. Isopurification of beta-secretase will permit chemical modelling critical event in the pathology of Alzheimer's disease.
                                                                                                                                                                                                                                                                                                          Claim 5; Page 60; 92pp; English.
                                                                                                                                                                                                                                                                                                                                                  Beta-secretase which specifically cleaves beta-amyloid precursor protein - useful to screen for inhibitors useful in treatment of
                                                                                                                                                                                                                                                                            AAW08216, AAW08217 and AAW08350 represent beta-cleavage
                                                                                                                                                                                                                                                                                                                                        Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                 WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                        Anderson JP, Mcconlogue LC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-JUN-1995;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    present sequence is a specifically preferred partial sequence of AAW00402 and is itself claimed as a new chemical entity.

The IL-6 antagonists are useful for treating autoimmune diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ATHE-) ATHENA NEUROSCIENCES INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-DEC-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9640885-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Beta-cleavage site; beta amyloid precursor protein; APP; beta-secretase; alpha-secretase; proteolytic cleavage; inhibitor; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW08217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW08217 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NLDA 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          double mutant APP beta-cleavage site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                             G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 AA;
                                                                                                                                                                                                                                                                                                                                         disease
                                           ĀΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                       Chrysler s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95US-0485152
95US-0480498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96WO-US09985
 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                        SMS,
Tan
 .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ഗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                       Jacobson-croak KL, H;
 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
20;
No.
DB 18;
7.8e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 17;
. 7.8e+05;
           Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Keim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                    PS
                                                                                                                                                                                                                                                                                sites
                                                                                             Isolation and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

```
RESULT 8
AAY33751
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 7
AAW61151
ID AAW6
 AC XX
                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 D)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                     Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
AAY33751;
                                                                                                                                                                                                                                                                         (beta-AP) and is believed to be the putative beta-secretase responsible for the pathogenic processing of APP to beta-AP in Alzheimer's disease, Down's syndrome and HCHWA-D. Recombinant fusion proteins (see AAW61152) were generated comprising the last 125 amino acids of APP (wild-type (see AAW61150)) or Swedish double mutation) fused to the C-terminal end of maltose binding protein. The fusion proteins were expressed in Escherichia coli, and used as
                        AAY33751 standard; Protein; 5
                                                                                                                                                                                                                                     The fusion proteins were expressed in Escherichia coli, ar substrates for beta-secretase in beta-secretase inhibitor Compounds that inhibit APP cleavage by beta-secretase may in the treatment of Alzheimer's disease.
                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel beta-secretase which cleaves beta-amyloid precursor protein useful for screening for compounds which inhibit the cleavage and are useful for treating Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                         This peptide comprises the site of the 'Swedish' double mutation beta-amyloid precursor protein (APP) (MBP-C125 SW) that is cleaved by a novel beta-secretase isolated from human 293 cells. This protease cleaves APP at the N-terminus of the beta-amyloid peptide (Apple 2014) and the N-terminus of the beta-amyloid peptide (Apple 2014).
                                                                                                                                                                                                                                                                                                                                                                                                                      This peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1998-348519/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Anderson JP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Beta-secretase; human; beta-amyloid precursor protein; APP; protease; inhibitor; screening; Alzheimer's disease; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APP Swedish double mutation cleavage site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ATHE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9826059-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW61151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAW61151 standard; Peptide;
                                                                                                               1 NLDA 4
                                                                                               2 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NLDA 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATHENA NEUROSCIENCES INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4;
                                                                                                                                                                                                             თ
                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 20; 39pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                             A,
                                                                                                                                                                                                                                                                                                                                                                                                                      comprises the site of the 'Swedish'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chrysler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96WO-US19549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96WO-US19549
                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMS,
                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                Score 20;
Pred. | No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Keim
                        AA.
                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PS,
                                                                                                                                                    7.8e+05;
thes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sinha
                                                                                                                                                                                DΒ
                                                                                                                                                                                19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                             Length
                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                               assays
                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                   useful
                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
```

0,

```
RESULT 9
AAB47261
                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                     ρ
                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-JUN-1996;
07-JUN-1995;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                        cleavage site AAY33750 and the Swedish mutant version are used in a method for detecting human beta-secretase cleavage of polypeptides and for identifying beta-secretase inhibitors. Inhibition of beta-secretase activity would be useful for chemical modelling of a critical event in the pathology of Alzheimer's disease. Inhibitors of beta-secretase would be useful for the prevention and treatment of Alzheimer's disease and
                                                                          Beta-secretase; isotype; beta-amyloid precursor protein; APP; beta-amyloid peptide; beta-AP; Alzheimer's disease; Downs syn HCHWA-D; Swedish mutation; maltose binding protein; MBP.
                                                                                                                        Swedish mutation
                                                                                                                                                                     AAB47261;
                                                                                                                                                                                         AAB47261 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                               cleavage site. APP is cleav
cleavage site AAY33750 and
                                                                                                                                                                                                                                                                                                                                                                                                                                            This sequence is the Swedish mutant beta-amyloid protein precursor (APP) cleavage site. APP is cleaved by beta-secretase AAY33741. The wild type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Examples;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A method for detecting useful for identifying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1999-517417/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Anderson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US5942400-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Swedish mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-NOV-1999
                                                                                                                                              18-JUL-2001
                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-AUG-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Beta-secretase; beta-amyloid protein precursor; APP; Down's syndrome;
                               US6221645-B1
                                                                                                                                                                                                                                                                                                                                                                Down's Syndrome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ELAN-) ELAN
          24-APR-2001
                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                  ω
                                                                                                                                                                                                                                                               1 NLDA 4
                                                     sapiens
                                                                                                                                                                                                                                                                                             4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JP,
                                                                                                                                                                                                                                                   ري.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Column 28; 43pp;
                                                                                                                                                                                                                                                                                                                                          Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      disease; cleavage site; mutant
                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                          ĄΑ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PHARM INC
                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96US-0659984.
95US-0480498.
95US-0485152.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jacobson-Croak KL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96US-0659984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      beta-amyloid protein precursor
                                                                                                                      APP sequence for cleavage by beta-secretase
                                                                                                                                                                                          Peptide;
                                                                                                                                             entry)
                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human beta-secretase cleavage of polypeptides beta-secretase inhibitors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           English.
                                                                                                                                                                                          U
                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                        Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sinha
                                                                                                                                                                                                                                                                                                       7.8e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                   DB
                                                                                                                                                                                                                                                                                                                   20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (APP)
                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                  Length 5;
                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cleavage site
                                                                                       syndrome;
                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                     AP)
Ld type
in a
ides
                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                             0,
```

```
RESULT 10
AAU78500
ID AAU78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    is characterized by an ability to cleave the 695-amino acid isotype of APP between amino acids 596 and 597. The fusion proteins contain the carboxy-terminal end of Malcose binding protein (MBP) fused to the carboxy-terminal 125 amino acids of either wild type APP or APP containing the Swedish mutation. Beta-secretase is thought to be responsible for the pathogenic processing of APP to form beta amyloic peptide (beta-AP) in beta-AP related conditions, e.g. Alzheimer's peptide (beta-BP) in beta-AP related conditions, e.g. Alzheimer's disease, Downs syndrome, HCHWA-D etc. Beta-secretase has a molecular weight of 260-300 kD and will bind to wheat germ aggluttnin but not to concanavalin A. Beta-secretase will cleave both the wild type and
                                                                                                                                         Key
Cleavage-site
                                                                                                                                                                                                                   Alzheimer's disease; APP; beta amyloid precursor protein; beta secretase; BACE; beta-site APP cleaving enzyme; human; nootropic; neuroprotective; beta-site amyloid precursor protein (APP)-cleaving enzyme; BACE secretase/sheddase; neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel antibody that specifically binds native beta-secretase protein useful for raising anti-idiotypic antibodies and for detecting or diagnosing pathological conditions related to presence of respective
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The sequences given in AAB47260-61 represent cleavage sites derived from wild-type and the Swedish mutation of beta-amyloid precursor protein (APP). These cleavage sites were used in fusion proteins which were used as substrates for the beta-secretase protein which
                                                                                                   WO200210354-A2
                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                             Beta secretase cleavage site of beta APP Swedish mutant.
                                                                                                                                                                                                                                                                                                                          18-JUN-2002
                                                                                                                                                                                                                                                                                                                                                       AAU78500
                                                                                                                                                                                                                                                                                                                                                                                  AAU78500 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example; Column 28; 42pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-315578/33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chrysler SMS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Swedish mutation of APP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sinha S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95US-0480498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96US-0660531
                                                                                                                                                         Location/Qualifiers
                                                                                                                               /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100
                                                                                                                               "Beta secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Keim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             English.
                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PS,
                                                                                                                                                                                                                                                                                                                                                                                    ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Anderson
                                                                                                                               cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 22;
7.8e+05;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       agglutinin but not to the wild type and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ή
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               beta amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              McConlogue LC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

0

01-AUG-2000; 2000CA-2313828 01-AUG-2001; 2001WO-CA01118 07-FEB-2002

```
ID XXX ACC CAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY9477:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cc amyloidogenic peptide Abeta which has been shown to be involved in the caetiology of Alzheimer's disease. Inhibition of BACE secretase can be careful administration of an antisense nucleotide molecule capable co flybridising with BACE mRNA, by using a ribozyme that targets and co degrades BACE secretase mRNA, with a peptide that can interfere with co binding of the enzyme with BACE or using an antibody or antagonist that can function as an inhibitor of BACE secretase activation. The methods of the invention modulate the activity of BACE secretase/sheddase by co preventing cleavage of BACE, which is useful for the treatment of a compressive construction as an inhibitor of BACE secretase activation of Abeta construction of Abeta construction also comprises a comethod for identification of an agent that can alter the ability of BACE secretase to associate with and process a known substrate, this method convention also comprises a method for determining whether an individual is at risk of developing a neurodegenerative disorder characterised by the generation of Abeta protein by measuring the levels of BACE constructs indicates a personative where an increase concerns the beta secretase cleavage site of the Swedish minant of construction also comprises and construction also comprises a method for determining whether an individual is at risk of developing a neurodegenerative disorder characterised by the generation of Abeta protein by measuring the levels of BACE constructs indicates a personation of the sequence constructs the beta secretase cleavage site of the Swedish minant of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                           26-MAR-1999;
                                                                               23-MAR-2000; 2000WO-US07755.
                                                                                                                                                        05-OCT-2000
                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                                Beta-secretase; enzyme; amyloid plaque; Alzheimer's Down's syndrome; amyloid angiopathy; gene therapy; r
                                                                                                                                                                                                                          WO200058479-A1
                                                                                                                                                                                                                                                                                                                                                                                      Beta-secretase; enzyme;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Beta-secretase substrate peptide SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY94771;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY94771 standard; Protein; 8 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   beta-site amyloid precursor protein (APP)-cleaving enzyme (BACE) secretase/sheddase. Cleavage of BACE by this enzyme results in the generation of a soluble BACE which enhances the production of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Modulating activity of beta-site amyloid precursor protein-cleaving enzyme secretase/sheddase for treatment of neurodegenerative disorder characterised by generation of Abeta protein, by preventing cleavage of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This invention relates to a novel method for modulating activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seidah NG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (RECL-) INST RECH CLINIQUES MONTREAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity es 4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the beta secretase cleavage site of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    precursor protein.
                        99US-0277229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                64pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 23;
7.8e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    17.
                                                                                                                                                                                                                                                                                                                                     therapy; neuroprotective
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Swedish mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
proteins. Beta-secretase is an enzyme involved in the production of one confidence of the components of amyloid plaques involved in Alzheimer's disease. The conformation includes an expression vector comprising the nucleotide conformation includes an expression vector comprising the nucleotide conformation are a polypeptide derivative of the producing the protein through culturing the transformed cells. Also concluded in the invention are a polypeptide derivative of the conformation are a polypeptide in a manmal comprising administering the conformation of the polymeptide in a manmal comprising administering the conformations of the beta-secretase exhibits neuroprotective and conformation probes in diagnostic assays to test for the presence conformation probes in diagnostic assays to test for the presence conformation probes in diagnostic assays to test for the presence conformation probes in diagnostic assays to test for the presence of beta-secretase expression, in gene conformation and anyloid angiopathy. The nucleotide sequence may also be conformation and the problemation of compounds conformation and the problematic assays to the beta-secretase conformation of compounds conformation and the problematic assays to the dentification of compounds conformation and the problematic assays to conformation and the problematic and the problematic assays to conformation and the problematic and the problematic assays to co
        Best Loc
Matches
                                                           Query Match
                                                                                                              Sequence
                                                                                                                                                                       peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This invention relates to 3 nucleotide sequences encoding beta-secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 10; Page 117; 145pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-594643/56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (AMGE-) AMGEN INC
     Local Similarity
nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vassar RJ,
                                                                                                                 œ
        Conservative
                                                                                                                 A
                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bennett BD;
  0;
                               Score 20;
Pred! No.
  Mismatches
. 7.8e+05; ches 0;
                                                      DB 21;
                                                   Length 8;
  Indels
  0;
```

```
В
                                                                                                                                                                          Ş
                                                                                                                                                RESULT 12
                                                              GB2357767-A.
    22-SEP-2000; 2000GB-0023315
                04-JUL-2001.
                                     Cleavage-site
                                                      Synthetic
                                                           Homo sapiens.
                                                                                                 Human aspartyl protease-1 beta-secretase Swedish mutant peptide.
                                                                                                                                   AAE10661 standard; peptide;
                                                                                                              10-DEC-2001
                                                                                                                          AAE10661;
                                                                                                                                                                ω
                                                                                                                                                                          1 NLDA 4
                                                                                                                                                               NLDA 6
                                                                                                             (first entry)
                                          Location/Qualifiers
                                                                                                                                    œ
                                                                                                                                    A
                                                                           neuroprotective;
                                                                                                                                                                                    Gaps
```

```
RESULT 13
AAE02613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 activity,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of the invention are useful for assaying hu-Aspl alpha-secretase activity, which in turn is useful for identifying modulators of hu-Aspl alpha-secretase activity are useful for treating Alzheimer's disease (AD) which causes progressive dementia with consequent formation of amyloid plaques, neurofibrillary tangles, gliosis and neuronal loss. Hu-Aspl protease substrate is useful for assaying hu-Aspl proteolytic activity, by contacting hu-Aspl protein with the substrate under acidic conditions and determining the level of hu-Aspl proteolytic activity. The present sequence is human aspartyl protease-1 (hu-Asp-1) beta-secretase Swedish (%) mutant peptide which is used for determining the enzymatic activity of Asp-1 protein lacking a transmembrane (TM) domain and containing (His)6 tag.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-SEP-1999;
23-SEP-1999;
23-SEP-1999;
13-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The patent discloses human aspartyl protease 1 (hu-Asp1) or modified asp1 proteins which lack transmembrane domain or amino terminal domain or cytoplasmic domain and retains alpha-secretase activity and amyloid protein precursor (APP) processing activity. The proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Polypeptide comprising fragments of human aspartyl protease with amyloid precursor protein processing activity and alpha-secretase activity, for identifying modulators useful in treating Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bienkowkski MJ,
          22-SEP-2000; 2000WO-US26080
                                       05-APR-2001
                                                                   WO200123533-A2
                                                                                              Cleavage-site
                                                                                                                                     Homo sapiens
                                                                                                                                                                   beta-secretase.
                                                                                                                                                                               Human; alpha-secretase; amyloid precursor protein; APP; Alzheimer's disease; antialzheimer's; aspartyl protease
                                                                                                                                                                                                                         Human Aspartyl protease-1 beta-secretase Swedish mutant form peptide
                                                                                                                                                                                                                                                       10-AUG-2001
                                                                                                                                                                                                                                                                                   AAE02613;
                                                                                                                                                                                                                                                                                                             AAE02613 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (PHAA ) PHARMACIA & UPJOHN CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                    ω
                                                                                                                                                                                                                                                                                                                                                                                                              1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                    NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                          4 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15;
                                                                                                                                                                                                                                                                                                                                                                                    6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Page 92; 187pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ã,
                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-US20881.
99US-0416901.
99US-0169232.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0155493.
99US-0404133.
                                                                                              Location/Qualifiers 4..5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gurney M;
                                                                                                                                                                                                                                                                                                             peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                             œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    English.
                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                    7.8e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

```
Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
ABB78622
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-SEP-1999;
23-SEP-1999;
13-OCT-1999;
06-DEC-1999;
                                                                                                    23-SEP-1999;
23-SEP-1999;
23-SEP-1999;
13-OCT-1999;
06-DEC-1999;
22-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention relates to enzymes for cleaving the alphasecretase site of the amyloid precursor protein (APP) and methods of identifying those enzymes. The methods may be used to identify enzymes that may be used to cleave the alpha-secretase cleavage site of the APP protein. The enzymes may be used to treat or modulate the progress of Alzheimer's disease. The present sequence is human Aspartyl protease-1 (hu-Asp-1) beta-secretase, Swedish (Sw) mutant form peptide which is used for determining the enzymatic activity of Asp-1 deltaTM (His)6 protein.
                                                                                                                                                                                                                        GB2367060-A
                                                                                                                                                                                                                                                                Human; Asp-1;
proteolytic.
                                                                                                                                                                                                                                                                                                                                                              ABB78622 standard; Peptide; 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Enzymes that cleave the alpha-secretase site of the amyloid protein, useful for the treatment of Alzheimer's disease -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI;
                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                               Human beta secretase peptide
                                                                                                                                                                                                                                                                                                                                          ABB78622;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                            Bienkowkski MJ,
                                                                                                                                                                              29-0CT-2001;
                                                                                                                                                                                                   27-MAR-2002
                                                                                                                                                                                                                                                                                                                     16-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (PHAA ) PHARMACIA & UPJOHN CO
                                                                                (PHAA ) PHARMACIA & UPJOHN
                                                                                                                                                                                                                                                                                                                                                                                                                            1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                                                                                                  NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-290516/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                           4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                  6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bienkowski MJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Page 94; 189pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Æ,
                                                                                                      2000GB-0023315
                                                                                                                                                                               2001GB-0025934
                                                                                                               99US-155493P.
99US-0404133.
99WO-US20881.
99US-0416901.
99US-169232P.
                                                                                                                                                                                                                                                                          Asp-2; aspartyl protease; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0155493.
99WO-US20881.
99US-0416901.
99US-0169232.
                                                            Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                           ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                               SEQ ID NO:71
                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 20; DB 22;
Pred. No. 7.8e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

Alzheimer's

Example 15;

Page

92;

182pp; English.

```
AAW82081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes a human aspartyl protease 1 (hu-Aspl) CC substrate (I) which comprises a peptide of no more than 50 amino acids, and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Comprises a peptide of no more than 50 amino acids, and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-Ala-Leu-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                               by a peptide comprising a protease protease activity in samples.
                                                                New fluorogenic compositions - containing 2 fluorophores separated
                                                                                                                  WPI; 1998-467579/40.
                                                                                                                                                                                                                                                                                                                      27-AUG-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAW82081 standard; peptide;
                                                                                                                                                                                                                                         20-FEB-1997;
                                                                                                                                                                                                                                                                               20-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                           conformation
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protease activity; fluorphore;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fluorogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW82081;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 NLDA 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 4; Conserv
                                                                                                                                                                                               ONCOIMMUNIN
                                                                                                                                                          Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protease indicator protease binding peptide #59.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                          Packard BS;
                                                                                                                                                                                                                                                                                                                                                                                                                                         change.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                       97US-0802981
                                                                                                                                                                                                                                                                             98WO-US03000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   detection; fluorogenic; cellular uptake;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                    binding site, used for detecting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7.8e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

밁 8

Claim

Page

77;

90pp; English

the plaque burden!

The compounds

```
RESULT 16
AAB07874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X66666666666668XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
       The specification describes a beta-secretase enzyme. The enzyme cleaves beta-amyloid precursor protein to produce beta-amyloid peptide. This enzyme is therefore implicated in the production of amyloid plaque components which accumulate in the brains of individuals afflicted with Alzheimer's disease. Inhibitors of beta-secretase are administered to a mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-like pathology to test if they maintain or improve cognitive
                                                                                                                                                               Purified beta-secretase protein used which can be used for the treatment
                                                                                                                      Disclosure; Page 12; 121pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW82023-W82240 are peptides used in the construction of a fluorogenic composition which is used for the detection of protease activity in biological samples. The products can be used for the detection of conformation changes in nucleic acids, oligosaccharides, proteins, peptides, lipids, phopholipids, glycolipids, plycoproteins, steroids or polymers. In addition, attachment of a hydrophobic group to a molecule can be used to enhance uptake by cells. The composition is composed of P peptide comprising a protease binding attached to the protease, F1, F2 peptides = fluorophores where F1 is attached to the amino terminal amino acid and $1, $2 peptides = when present, are peptide spacers where $1, when present, is attached to the amino terminal amino acid and $2, $3 peptides = when present, are peptide spacers where $1, when present, is attached to the amino terminal acid, and $2, when present, is attached to the amino terminal acid.
                                                                                                                                                                                                           WPI; 2000-533011/48.
                                                                                                                                                                                                                                      Anderson JP, Basi
Sinha S, Tatsuno
                                                                                                                                                                                                                                                                                                                                                                              17-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Beta-secretase;
amyloid plaque (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A peptide fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB07874 standard;
                                                                                                                                                                                                                                                                                (ELAN-) ELAN
                                                                                                                                                                                                                                                                                                           10-FEB-1999;
15-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                    10-FEB-2000; 2000WO-US03819
                                                                                                                                                                                                                                                                                                                                                                                                          WO200047618-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB07874;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inhibitor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                       disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                      Basi G,
tsuno G,
                                                                                                                                                                                                                                                                               PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
                                                                                                                                                                                                                                                                                                           99US-0119571
99US-0139172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        beta-amyloid precursor protein; beta-amyloid peptide; component; Alzheimer's disease; amyloidogenic disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                      Tung
                                                                                                                                                                                                                                    Doane I
                                                                                                                                                                                protein used
                                                                                                                                                                                                                          · MT,
Wang| :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 beta-amyloid precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                 Frigon
ng|S, M
                                                                                                                                                                 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.
                                                                                                                                                               amyloidogenic diseases
                                                                                                                                                                                                                                 n N, John V
McConlogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 19;
7.8e+05;
                                                                                                                                                                                                                                                   John V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                    Ľ;
                                                                                                                                                                                                                                                   Power
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein.
                                                                                                                                                               inhibitors
ses e.g.
                                                                                                                                                                                                                                                   Σ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
RESULT 17
AAB07894
                                                SSSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
 Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                   The specification describes a beta-secretase enzyme. The enzyme cleaves beta-amyloid precursor protein to produce beta-amyloid peptide. This enzyme is therefore implicated in the production of amyloid plaque components which accumulate in the brains of individuals afflicted with Alzheimer's disease. Inhibitors of beta-secretase are administered to a mammalian subject e.g. with Alzheimer's disease or Alzheimer's disease-like pathology to test if they maintain or improve cognitive ability or reduce the plaque burden. The compounds are used for the treatment of amyloidogenic diseases e.g. Alzheimer's disease. The present sequence represents a peptide substrate used to test the activity of beta-secretase enzyme.
                                                                                                                                                                                                                                       Purified beta-secretase protein used in which can be used for the treatment of a Alzheimer's disease .
                                                                                                                                                                                                                                                                                                            Anderson JP, Basi G,
Sinha S, Tatsuno G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Beta-secretase;
amyloid plaque
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          treatment of amyloidogenic diseases e.g. Alzheimer's disease. The present sequence represents a peptide derived from beta-amyloid
                                                Sequence
                                                                                                                                                                                                                 Example 4;
                                                                                                                                                                                                                                                                                       WPI; 2000-533011/48
                                                                                                                                                                                                                                                                                                                                                                        10-FEB-1999;
15-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200047618-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cleavage-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Substrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB07894;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB07894 standard; Peptide; 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 precursor
                                                                                                                                                                                                                                                                                                                                                                                                            10-FEB-2000; 2000WO-US03819
                                                                                                                                                                                                                                                                                                                                                                                                                                    17-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inhibitor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-NOV-2000
                                                                                                                                                                                                                                                                                                                                                (ELAN-) ELAN PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4;
 Similarity
4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for beta-secretase enzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9 AA;
                                                9
                                                                                                                                                                                                                 Page 71; 121pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
  Conservative
                                                AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                        99US-0119571.
99US-0139172.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      component;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                beta-amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers 5..6
100.0%; S
100.0%; F
tive 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                            Doane MT, Fr
Tung J, Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     oid precursor protein; beta-amyloid Alzheimer's disease; amyloidogenic
                                                                                                                                                                                                                 English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
           Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
 Mismatches
                                                                                                                                                                                                                                                                                                            Frigon
ang S, M
; DB 21;
. 7.8e+05;
ches 0;
                                                                                                                                                                                                                                                   assays to discover inhibitors amyloidogenic diseases e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 21;
. 7.8e+05;
                                                                                                                                                                                                                                                                                                             McConlogue
                                                                                                                                                                                                                                                                                                                          z
                                                                                                                                                                                                                                                                                                            John V,
onlogue L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                      Length 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
 Indels
                                                                                                                                                                                                                                                                                                                          Power
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide;
disease;
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

RESULT 19 ABB09003

ABB09003 standard;

peptide;

φ

XXXXXXX

ABB09003; 19-JUN-2002

(first entry)

Peptide #1 used as

a tag to

identify cleavage products

```
RESULT 18
AAG73297
                    Q
                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
밁
                                                      Query Match
Best Local :
                                           Matches
                                                                                                          The present invention describes fluorogenic compositions which can used for the detection of protease activity. This can be useful as indicator of viral infection, cancer metastasis, haemophilla, emphy thrombosis and arthritis. The fluorogenic compositions comprise a peptide, a peptide spacer and a donor and an acceptor fluorophore. peptide is cleaved by a protease and the fluorophores can then be detected. The present sequence is one of the peptides described in exemplification of the invention.
                                                                                                                                                                                                                                                                                             WPI;
                                                                                        Sequence
                                                                                                                                                                                                                                         New fluorogenic compositions whose fluorescence level increases in the presence of active proteases, useful for detecting and localizing protease activity in biological samples, particularly in frozen tissue samples
                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200118238-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAG73297;
                                                                                                                                                                                                                Claim 1;
                                                                                                                                                                                                                                                                                                                    Komoriya A,
                                                                                                                                                                                                                                                                                                                                                                 10-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                      11-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                              15-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                thrombosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           viral infection; cancer metastasis; emphysema; arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protease detection; peptide cleavage; enzyme activity; fluorogenic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protease indicator compound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAG73297
                                                                                                                                                                                                                                                                                                                                          (ONCO-) ONCOIMMUNIN INC
           1 NLDA 4
                                          Local Similarity
mes 4; Conserv
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NLDA 4
NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NLDA
                                                                                                                                                                                                                                                                                              2001-389573/41
                                                                                                                                                                                                                Page 70; 86pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                        9 AA;
                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                haemophilia.
                                                                                                                                                                                                                                                                                                                  Packard BS
                                                                                                                                                                                                                                                                                                                                                                                       2000WO-US24882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                                                                                                                 99US-0394019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry)
                                                    100.0%;
                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide #26
                                                      Score 20;
Pred. No.
                                             Mismatches
                                                        7
                                                                  DB
                                                     DB 22;
                                             0
                                                              Length 9;
                                             Indels
                                           0
                                                                                                                                                                   emphysema
                                                                                                                        in the
                                           Gaps
                                                                                                                                               The
                                                                                                                                                                                be
an
                                           0
```

```
ABB06519
ID ABB0
XX
AC ABB0
AX
AC ABB0
DT 31-M
XX
DE Beta
XM Beta
XM Beta
XM Alzh
XM Alzh
XM Alzh
XM Alzh
XM Alzh
XM W020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WAX SO COLOR OF THE COLOR OF TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence
site of b
                                                     Homo sapiens
Synthetic.
                                                                                                                                  aspartyl protease; n
Alzheimer's disease
WO200206306-A2
                                                                                                                                                                             Beta-secretase; enzyme; cleavage site; amyloid
                                                                                                                                                                                                                                              Beta-secretase
                                                                                                                                                                                                                                                                                                    31-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  They are also useful for treating diseases characterised by beta-amyloid deposits in brain, and for producing beta-secretase complexes. This sequence represents a peptide that encorporate the known cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This invention relates to substituted amines and their salts, which are nootropic, neuroprotective, cerebroprotective, haemostatic and antiparkinsonian in their action. They are used in the preparation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           syndrome, cerebral amyloid angiopathy, dementia associated with Parkinson's disease, dementia associated with progressive supranuclear palsy, and dementia associated with cortical basal degeneration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a composition useful for treating, preventing or delaying the on-set of Alzheimer's disease, for treating mild cognitive impairment, Down
                                                                                                                                                                                                                                                                                                                                                                                                       ABB06519 standard; Peptide; 9 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          beta-secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New substituted amines are e.g. beta-amyloid peptide inhibitors, useful for treating Alzheimer's disease, mild cognitive impairment and Down's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-JUN-2000; 2000US-215323P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200202505-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cleavage-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Amyloid precursor protein; APP; Alzheimer's disease; nootropic; neuroprotective; cerebroprotective; haemostatic; antiparkinsonian; Down's syndrome; cerebral amyloid angiopathy; dementia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ELAN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       beta-secretase. This substrate is used to assay pretase activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        D; Page 96; 136pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ELAN PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hom R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001WO-US20852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                disease, for treating mild cognitive impairment, Down's
                                                                                                                                                                                                                                           related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers 5..6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "Beta secretase cleavage site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       John V,
                                                                                                                                                         neuroprotective; nootropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                        peptide SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maillaird
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 20; DB 23;
Pred. No. 7.8e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                        IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ĭ
                                                                                                                                                                                                                                        NO:113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                   protein precursor; APP;
beta-secretase inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
RESULT 21
AAM50897
  ρy
                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                Beta-secretase; substrate; amyloid precursor protein;
APP; amyloid beta peptide; inhibitor; screening;
neurodegenerative disorder; cognitive impairment; Down's syndrome;
Alzheimer's disease; hereditary cerebral haemorrhage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention describes an isolated peptide (1) comprising a sequence of at least four amino acids, where the peptide is a substrate for conducting aspartyl protease assays. (1) has neuroprotective and nootropic activities, and can be used as an inhibitor of beta-secretase activity. A beta-secretase modulator from the present invention can be used for inhibiting beta-secretase activity in vivo, and in the manufacture of a medicament for the treatment of Alzheimer's disease. Pharmaceutical compositions from the present invention can be used for treating a disease or condition characterised by an abnormal beta-secretase activity. (1) is useful for identifying agents that modulate the activity of human Asp2 aspartyl protease (Hu-Asp2). (1) is useful as a core structure to construct derivatives. ABL49914 to ABL49925 and ABB06409 to ABB06593 represent sequences used in the exemplification
29-JUN-2001; 2001WO-US21012.
                            10-JAN-2002
                                                       WO200202512-A2
                                                                                   Cleavage-site
                                                                                                                             Synthetic
                                                                                                                                                     cerebral amyloid angiopathy; dementia; therapy.
                                                                                                                                                                                                                                          Oligopeptide substrate for beta-secretase.
                                                                                                                                                                                                                                                                         07-MAY-2002
                                                                                                                                                                                                                                                                                                                              AAM50897 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel substrates for human aspartyl protease useful for identifying modulators of beta secretase activity of aspartyl protease for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2002-216995/27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JUL-2000;
12-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Heinrikson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yan R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (PHAA ) PHARMACIA & UPJOHN CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-JUL-2001; 2001WO-US23035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                     3 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                               1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tomasselli AG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page 156;
                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-219795P.
2001US-275251P.
                                                                                   Location/Qualifiers 5..6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           188pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gurney ME,
                                                                                                                                                                                                                                                                                                                                ڡ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 20; DI
Pred. No. 7.8
0; Mismatches
                                                                                                                                                                                                                                                                                                                              A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 20; DB 23;
NO. 7.8e+05;
smatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Emmons TL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bienkowski MJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

```
DXXXXXXXX
                                                                                                                                                                              ABB07
                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                RESULT 22
                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                substrate cleavage results in the presence of an inhibitor and in the presence of a control provides a measure of the compound's inhibitory activity. Novel compounds of the invention are effective inhibitors of beta-secretase, inhibit beta-secretase mediated cleavage of APP, are effective inhibitors of A beta production, and/or effectively reduce amyloid beta deposits or plaques. They are used in the treatment or prevention of diseases characterised by amyloid deposits in the brain, e.g. for treating or preventing Alzheimer's disease (AD), for helping prevent or delay the onset of AD, for treating mild cognitive impairment (MCI), preventing or delaying the onset of AD in those who would progress from MCI to AD, for treating Down's syndrome and hereditary cerebral haemorrhage with Amyloidosis of the Dutch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JUN-2000;
22-NOV-2000;
15-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (APP). The peptide, which may optionally be tagged with fluorescent or chromogenic molety, can be used in assays determine the beta-secretase inhibitory activity of novel substituted amine compounds of the invention. Comparison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ELAN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                           of mixed vascular and degenerative origin, dementia associated with Parkinson's disease, dementia associated with progressive supranuclear palsy, and dementia associated with cortical basal degeneration, and for treating diffuse Lewy body type of AD (all
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           type, for treating cerebral amyloid angiopathy and preventing its potential consequences i.e. single and recurrent lobar haemorrhages for treating other degenerative dementias, including dementias
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence is that of a peptide that incorporates the known cleavage site of beta-secretase on amyloid precursor protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New substituted amines are e.g. amyloid beta peptide production inhibitors, useful for treating or preventing e.g. Alzheimer's disease, mild cognitive impairment and other degenerative diseases -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
APP; amine derivative; beta-secretase; amyloid precursor protein; A beta; amyloid beta peptide; beta-amyloid; nootropic; neuroprotective;
                                               Synthetic oligopeptide substrate having beta-secretase cleavage site
                                                                                         08-MAY-2002
                                                                                                                          ABB07598
                                                                                                                                                          ABB07598 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example D; Page 344; 651pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Maillaird M,
Freskos JN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13-FEB-2001;
29-MAR-2001;
                                                                                                                                                                                                                                                                      1 NLDA 4
                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002-171627/22
                                                                                                                                                                                                                                                                                                                         4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PHARMACIA & UPJOHN CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ELAN PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                      100.0%; ilarity 100.0%; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-215323P.
2000US-252736P.
2000US-25595P.
2000US-256849P.
2001US-26849P.
2001US-279779P.
2001US-295589P.
                                                                                                                                                                                                                                                                                                                                                                                             A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hom C, G
Pulley SR,
                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gailunas A,
R, Beck JP,
                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                      Score 20; DB 23; Pred. No. 7.8e+05;
                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jagodzinska B,
Tenbrink RE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Comparison of
                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   assays to
                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fang LY,
                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   John
                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <
                                                                                                                                                                                                                                                                                                                       0;
```

09-APR-2002

(first entry)

Disubstituted amine derivative; Alzheimer's disease; Down's syndrome; degenerative disease; beta-amyloid deposit; mild cognitive impairment;

Oligopeptide substrate #1, used in the assay of the invention

AAE16663 RESULT 23

AAE16663 standard; peptide;

0

AAE16663;

```
밁
                                                                                                                                    Š
                                                                                                                                                                                                                               The invention relates to disubstituted amine derivatives of specified formulae or their salts. The amine derivatives can inhibit beta-secretase activity or inhibit the cleavage of amyloid precursor protein (APP) in a reaction mixture. They can also be used to inhibit production of amyloid beta peptide (A beta) in a cell or inhibit production of beta-amyloid plaque in an animal. The amine derivatives are useful for treating or preventing a disease characterized by beta-amyloid deposits in the brain e.g. for treating or preventing Alzheimer's disease (AD), for helping prevent or delay the onset of AD, for treating mild cognitive impairment (MCI), preventing or delaying the onset of AD in those who would progress from MCI to AD, for treating Down's syndrome, humans who have hereditary cerebral haemorrhage with the Amyloidosis of the Dutch type, cerebral amyloid angiopathy and preventing its potential consequences i.e. single and recurrent lobar haemorrhages, for treating other degenerative origin, dementias, including dementias of mixed vascular and degenerative origin, and consequences in the consequence with the barkinson's disease, dementia associated with head.
                                                                Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
Cleavage-site
                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New disubstituted amine derivatives, useful disease and other degenerative diseases -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2002-188416/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Beck JP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-JUN-2000;
29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-JUL-2001; 2001WO-US21000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200202520-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cerebroprotective; haemostatic; antiparkinsonian.
                                                                                                                                                                      cleavage site of beta-secretase, used
                                                                                                                                                                                    progressive supranuclear palsy, dementia associated with cortical basal degeneration, diffuse Lewy body type of Alzheimer's disease. Sequences ABB07598-599 are synthetic APP oligopeptide substrates containing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ELAN-) ELAN PHARM INC.
(PHAA ) PHARMACIA & UPJOHN CO
4
                 1 NLDA 4
                                                                4.
                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gailunas A,
                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 163;
                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-215323P
2001US-0895843
                                                                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers 5..6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "beta-secretase cleavage site"
                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               286pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hom R,
                                                                  0,
                                                                                Score 20; DB 23; Pred. No. 7.8e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jagodzinska B,
                                                                   Mismatches
                                                                                                                                                                      to assay
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for treating Alzheimer's
                                                                   0
                                                                                                                                                                      beta-secretase activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       John
                                                                                                  Length
                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maillaird M;
                                                                0
                                                              Gaps
```

```
RESULT 24
AAU74837
ID AAU74
XX AAU74
XX AM916
CKW nootz
KW antig
                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                Compounds of the invention possess beta secretase inhibitory activity and are useful for inhibiting beta-secretase mediated cleavage of amyloid precursor protein (APP) and particularly, to inhibit the production of amyloid beta (A beta) peptide. They are useful for treating on preventing a disease characterised by beta-amyloid deposits in the brain e.g. for treating or preventing Alzheimer's disease (AD), for helping to prevent or delay the onset of Alzheimer's disease, for treating mild cognitive impairment (MCI), Down's syndrome, hereditary cerebral haemorrhage with the amyloidosis of the Dutch type, cerebral amyloid angiopathy and preventing its potential consequences i.e. single and recurrent lobar demonrhages, for treating other degenerative dementias including dementias of mixed vascular and degenerative origin, dementia associated
                          Amyloid precursor protein; APP; Alzheimer's disease; amine XV,
                                                                 Synthetic amyloid
                                                                                               09-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                       with Parkinson's disease, dementia associated with progressive supranuclear palsy, dementia associated with cortical basal degeneration and diffuse Lewy body type of Alzheimer's disease. The present sequence is oligopeptide substrate used in assay of the invention.
                                                                                                                                AAU74837
                                                                                                                                                          AAU74837 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cleavage-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hereditary cerebral haemorrhage; amyloidosis; degenerative dementia; cerebral amyloid angiopathy; Parkinson's disease; supranuclear palsy; cortical basal degeneration; AD; MCI; amyloid precursor protein; beta-secretase; amyloid beta peptide; A beta peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New disubstituted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ELAN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-JUN-2001; 2001WO-US20856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200202518-A2
                                                                                                                                                                                                                                                        1 NLDA 4
                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                        NLDA
                                                                                                                                                                                                                                                                                                    4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ELAN PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PHARMACIA & UPJOHN CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gailunas A,
   neuroprotective; cerebroprotective;
sonian; beta-secretase; amyloid beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 163; 286pp; English.
                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          other degenerative diseases
                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-215323P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers 5..6
                                                            precursor protein (APP) oligopeptide substrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amine derivatives, useful
                                                                                                                                                                                                                                                                                               100.0%; ; 1
100.0%; ; 1
tive 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alzheimer's disease and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to disubstituted amine derivative compounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hom R,
                                                                                                                                                                                                                                                                                                               Score 20; I
Pred. No. 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jagodzinska B,
                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                                                                                                                                                                 .8e+05;
s 0;
                                                                                                                                                                                                                                                                                                                                23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for treating
peptide; amyloidosis;
                haemostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     John V,
                                                                                                                                                                                                                                                                                                                              Length 9;
                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              degenerative diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Maillaird
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alzheimer's
                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                               Gaps
                                                             #1.
                                                                                                                                                                                                                                                                                               0;
```

```
RESULT 25
AAW08362
ID AAW08
                                                                                                                                                                                                                                                                                                       DXX AC
                                                                                                                                                              망
                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   activities. The amine acts as a beta-secretase activity inhibitor, inhibiting cleavage of amyloid precursor protein (APP) and the formation of amyloid beta peptide and beta-amyloid plaque production. The amine of the invention is useful for treating or preventing a disease characterised by beta-amyloid deposits in the brain e.g. Alzheimer's disease (AD), for treating mild cognitive impairment (MCI), preventing or delaying the onset of Alzheimer's disease in those who would progress from MCI to AD, for treating Down's syndrome, humans who have hereditary cerebral haemorrhage with the Amyloidosis of the Dutch
 05-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                         type, cerebral amyloid angiopathy and preventing its potential consequences i.e. single and recurrent lobar haemorrhages, for treating other degenerative dementias, including dementias of mixed vascular and degenerative origin, dementia associated with Parkinson's disease, dementia associated with progressive supranuclear palsy, dementia associated with cortical basal degeneration and diffuse Lewy body type of Alzheimer's disease. The present sequence represents a synthetic
                                     AAW08362;
                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This invention relates to a novel substituted amine of formits salts which can be used to treat Alzheimer's disease and diseases. The compound of the invention may have nootropic.
                                                                   AAW08362 standard; peptide; 10 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example D; Page 118; 434pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New substituted amines are e.g. amyloid beta peptide production inhibitors, useful for treating or preventing e.g. Alzheimer's disease, mild cognitive impairment and other degenerative diseases -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cleavage site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                              APP oligopeptide substrate #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neuroprotective,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-147995/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (ELAN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-JUN-2000; 2000US-215323P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-JUN-2001; 2001WO-US20930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200202506-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Parkinson's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hereditary cerebral haemorrhage; cortical basal degeneration; cerebral amyloid anglopathy; lobar haemorrhage; degenerative dementia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         beta-amyloid plaque; mild cognitive impairment;
                                                                                                                                                             4 NLDA
                                                                                                                                                                                                1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ELAN PHARM INC
                                                                                                                                                                                                                                                                                                                                       substrate was used to test the efficiency of the amine as an of beta secretase enzyme \mbox{\tt activity}\,.
                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  disease; supranuclear palsy; dementia.
(first entry)
                                                                                                                                                                                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "Beta-secrețase cleavage site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cerebroprotective, haemostatic and antiparkinsonian
                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English
                                                                                                                                                                                                                                  Score 20; DB 23;
Pred. No. 7.8e+05;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                              for the
                                                                                                                                                                                                                                                                                                                                                                            beta secretase enzyme.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MCI; Down's syndrome;
                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of formula XV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and similar
                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
```

```
Š
                                                                                                                       ID
                                                                                                                                   AAY33756
                                                                                                                                                                                        밁
                                                                                                                                                 RESULT 26
                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                AAW08359-W08362 represent substrates for the enzyme of the invention. The enzyme of the invention is beta-secretase, and specifically cleaves beta-amyloid precursor protein (beta-APP). Normal processing of beta-APP is thought to occur via cleavage between residues 16 and 17 of the beta-amyloid peptide region by an alpha-secretase. Pathogenic processing is thought to occur by beta-secretase cleavage of beta-APP. Beta-secretase activity can be detected and measured using a method of the invention, which detects at least one of the beta-secretase cleavage products formed on cleavage. The method can be used to determine whether a test substance inhibits proteolytic cleavage, by beta-secretase, of beta-APP. Compounds effective to at least partially inhibit beta-Secretase activity can be used to inhibit cleavage of beta-APP in cells or mammalian hosts. Isolation and purification of beta-secretase will permit chemical modelling of a critical event in the pathology of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Beta-secretase which specifically cleaves beta-amyloid precursor protein - useful to screen for inhibitors useful in treatment of Alzheimer's disease
Beta-secretase; beta-amyloid protein precursor; Alzheimer's disease; measure activity; cleavage
                                        Synthetic oligopeptide 5-5'SW
                                                                    09-NOV-1999
                                                                                              AAY33756
                                                                                                                    AAY33756 standard; Protein; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W09640885-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  alpha-secretase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Beta-cleavage site;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Beta-secretase substrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mcconlogue LC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anderson JP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ATHE-) ATHENA NEUROSCIENCES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-DEC-1996
                                                                                                                                                                                                     1 NLDA 4
                                                                                                                                                                                        4
                                                                                                                                                                                        NLDA
                                                                                                                                                                                                                                          4.
                                                                                                                                                                                                                                                                                                                           ú
                                                                                                                                                                                                                                                                                               10
                                                                                                                                                                                                                                        100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                           disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 45;
                                                                  (first entry)
                                                                                                                                                                                                                                                                                               AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chrysler SMS,
, Sinha S, Tan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95US-0485152.
95US-0480498.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96WO-US09985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "acetylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                proteolytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                beta amyloid precursor protein; APP; beta-secretase; oteolytic cleavage; inhibitor; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       English.
                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ή,
                                                                                                                                                                                                                                                       Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jacobson-croak KL,
                                                                                                                       A
                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                       рв
92;
                                                                                                                                                                                                                                                                   18;
                                                                                                                                                                                                                                          0
 APP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Keim
                                                                                                                                                                                                                                                                     Length 10;
                                                                                                                                                                                                                                          Indels
             Down's
                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                          0;
```

```
RESULT 27
AAY69707
ID AAY69707
XX
AC AAY69
AC AAY69
XX
Beta
XX
Woota
KW Noota
KW Cleav
KW Cleav
KW Alzh
KW Alzh
XX
WO991
YN WO991
PD 16-DJ
PD 16-DJ
PF 04-JI
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-JUN-1996;
07-JUN-1995;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequences AAY33752-Y33756 are synthetic oligopeptides used for measuring the activity of beta-secretase (AAY33741). Beta-secretase is capable of cleaving beta-amyloid protein precursor (APP) (AAY3742). These synthetic peptides contain the cleavage site of APP. Beta-secretase and APP are used in a method for detecting human beta-secretase cleavage of polypeptides and for identifying beta-secretase inhibitors. Inhibiton of beta-secretase activity would be useful for chemical modelling of a critical event in the pathology of Alzhelmer's disease. Inhibitors of beta-secretase would be useful for the prevention and treatment of Alzhelmer's disease and Down's Syndrome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A method for detecting human beta-secretase cleavage of polypeptides
                                                                                   Synthetic
                                                                                                                                  Nootropic; neuroprotective; beta-amyloid precursor protein; metabolism; cleavage site; beta-secretase; neurodegenerative disease;
                                                                                                                                                                                                                                               AAY69707 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-517417/43.
                                                                                                                         Alzheimer's disease
                                                                                                                                                                      Beta-APP alpha-secretase substrate
                                                                                                                                                                                                11-APR-2000
                                                                                                                                                                                                                        AAY69707;
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24 - AUG - 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US5942400-A
                                                            WO9964587-A1
                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ELAN-) ELAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                           NLDA 4
                                                                                                                                                                                                                                                                                                             NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for
                                                                                                                                                                                                                                                                                                                                                            4.
                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JÞ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Column 30;
                                                                                                                                                                                                                                                                                                                                                                                                            10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            identifying
                                                                                                                                                                                                                                                                                                                                                            100.0%; ilarity 100.0%; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PHARM INC
                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                             ΑĄ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jacobson-Croak
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96US-0659984.
95US-0480498.
95US-0485152.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96US-0659984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             beta-secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "N-terminal Ser
                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                           Score 20; DB Pred. No. 92; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΚĽ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sinha
                                                                                                                                                                      [NLD]-APP(-5,+5).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             inhibitors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                is acetylated"
                                                                                                                                                                                                                                                                                                                                                                                    BB
                                                                                                                                                                                                                                                                                                                                                                                    20;
                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                    Length 10;
                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                            Gaps
```

0

04-JUN-1999;

99WO-FR01326

16-DEC-1999.

```
RESULT 28
AAE10653
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
      23-SEP-1999;
23-SEP-1999;
23-SEP-1999;
13-OCT-1999;
06-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             novel polypeptide with beta secretase activity that can cleave specifically the natural beta amyloid precursor protein (bAPP). Normal cleavage of the protein occurs between amino acids Met596-Asp597 and Val636-Ile637 (positions 4-5 and 44-45 of AAY69701). The novel polypeptide is used to identify agents that interact specifically with it. These agents regulate metabolism of APP, particularly they slow down or reduce production of beta amyloid, so can be used to treat neurodegenerative diseases, particularly Alzheimer's disease.
                                                                     22-SEP-2000;
                                                                                           04-JUL-2001
                                                                                                                                    Cleavage-site
                                                                                                                                                                                                                                       Alzheimer's disease; AD; dementia; amyloid plaque; neuronal loss; pro APP-Sw beta-secretase peptide; mut
                                                                                                                                                         Misc-difference
                                                                                                                                                                             Misc-difference
                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                              Human APP-Sw
                                                                                                                                                                                                                                                                                                                   10-DEC-2001
                                                                                                                                                                                                                                                                                                                                                          AAE10653 standard;
                                                                                                                                                                                                                       HOMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peptides AAY69702-Y69718 represent synthetic peptide substrates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Polypeptide with beta-secretase activity, specific for wild-type amyloid precursor protein, useful in treating Alzheimer's disea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-JUN-1998;
31-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (RHON)
                                                                                                                                                                                                                                                                                                                                                                                                                        1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                      sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                              NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-097537/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RHONE-POULENC RORER
                                                                                                                                                                                                                                                                                                                                                                                                              7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Munoz-Gimenez N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                          beta-secretase substrate peptide mutant,
                                                                     2000GB-0023315
                                                                                                                                                                                                                                                                                                                (first entry)
      99US-0404133.
99WO-US20881.
99US-0416901.
99US-0169232.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                  99US-0155493
                                                                                                                                                          /note=
5
                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                        protease 1; Asp1; amyloid precursor protein;
ease; AD; dementia; neurofibrillary tangle; gliosis;
neuronal loss; proteolytic; nootropic; neuroprotective;
retase peptide; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98FR-0007068
99US-0122599
                                                                                                                                              /note=
                                                                                                                                                                                                                                                                                                                                                          peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        44pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                100
                                                                                                                                                                "Wild type Lys substituted with
                                                                                                                                            "Wild
                                                                                                                                                                                                                                                                                                                                                                                                                                                                .0%;
                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P&
                                                                                                                                            type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Moutaouakil M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Z
                                                                                                                                            Met
                                                                                                                                                                                                                                                                                                                                                                                                                                                                20;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           treating
                                                                                                                                            substituted with Leu
                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB
92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cohen
                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ψ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bertrand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ש
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      down
                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cactivity, which in turn is useful for identifying modulators of the Aspl alpha-secretase activity are useful for treating Alzheimer's thu-Aspl alpha-secretase activity are useful for treating Alzheimer's disease (AD) which causes progressive dementia with consequent formation of amyloid plaques, neurofibrillary tangles, gliosis and neuronal loss. Hu-Aspl protease substrate is useful for assaying the substrate under activity, by contacting hu-Aspl protein with the substrate under activity, by contacting hu-Aspl protein with hu-Aspl proteolytic activity, The present sequence is human amyloid precursor protein-Swedish (APP-Sw) beta-secretase specific substrate peptide mutant, PHA-247574E. This peptide is obtained by Swedish (KM-NL mutation. This peptide is used for assaying the beta-secretase activity of human Aspartyl protease 2a (Asp2a) protein. The peptide is also used for determining the relationship between Aspl and
                                          09-MAY-2001; 2001WO-IB00799
                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              activity,
                                                                                                      WO200150829-A2
                                                                                                                                  Cleavage-site
                                                                                                                                                                                                            neuroprotective;
                                                                                                                                                                                                                            beta-secretase;
neurofibrillary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  domain or cytoplasmic domain and retains alpha-secretase activity and amyloid protein precursor (APP) processing activity. The proteins of the invention are useful for assaying hu-Aspl alpha-secretase
                                                                        19-JUL-2001
                                                                                                                                                                                                                                                       Human; aspartyl
                                                                                                                                                                                                                                                                                                                    23-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                               AAE06898
                                                                                                                                                                                                                                                                                     Human amyloid precursor protein (ApP-Sw) beta-secretase peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Polypeptide comprising fragments of human aspartyl protease with amyloid precursor protein processing activity and alpha-secretase activity, for identifying modulators useful in treating Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The patent discloses human aspartyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 12; Page 84; 187pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (PHAA ) PHARMACIA & UPJOHN CO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NLDA
                                                                                                                                                                              sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                         NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proteins which lack transmembrane domain or amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 4; Conser
                                                                                                                                                                                                                                                                                                                                                                            standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ŋ,
                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ÃĄ;
                                                                                                                                                                                                           protease 2; Asp 2;|beta-amyloid precursor protein;
Alzheimer's disease; dementia; amyloid plaque; gliosis;
tangle; neuronal loss; amyloid-beta peptide; nootropic;
antisense therapy; APP-Sw; gene therapy.
                                                                                                                                  Location/Qualifiers 5..6
                                                                                                                                                                                                                                                                                                                                                                               10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DВ
92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (hu-Aspl)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               modified
                                                                                                                                                                                                                                                                                     #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

09-MAY-2001; 2001WO-IB00799

```
AAU06627
ID AAUU
XX
AC AAUC
AC AAUC
AX
DE Synh
XX
KW Aspe
KW Aspe
KW amy
XX
CS
Synh
XX
CS
C1et
PN WO20
PN 12--
XX
PF 09--
PR 09--

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to human aspartyl proteases (Hu-Asp), beta-amyloid precursor protein (APP) isoforms and their corresponding DNA molecules. CC Human aspartyl proteases can act as beta-secretase proteases useful for treating Alzheimer's disease. APP isoforms are useful for identifying CC therapeutics for the treatment and prevention of Alzheimer's disease, CC dementia, formation of amyloid plaques, neurofibrillary tangles, gliosis CC and neuronal loss. APP isoforms are also used in methods for identifying CC inhibitors and modulators of human Asp2 activity. The invention relates to a method for identifying agents that modulate the activity of human CC aspartyl protease Asp2. Amyloid-beta peptides obtained from APP are used CC as a means to screen in cellular assays for the inhibitors of beta-and CC gamma- secretase. Hu-Asp DNA fragments are useful as probes or primers in CC polymerase chain reactions (PCR). The probes are useful for detecting CC Hu-Asp nucleic acids in in vitro assays and in Northern and Southern CC blots. The present sequence is human amyloid precursor protein (APP-Sw) beta-secretase peptide related to the invention.
                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best, Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HEIN/)
(PARO/)
                                                                                                                                                                                                                     neuroprotective;
amyloid-beta; Abo
                                                                                                                                                                                                                                  Aspartyl protease; Asp2; beta-secretase; nootropic; neuroprotective; amyloid protein precursor; APP; Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel purified polypeptide comprising fragment of mammalian a protease 2, lacking Asp2 transmembrane domain and retaining becretase activity of Asp2 useful for identifying inhibitors activity -
09-MAY-2001; 2001WO-IB00798
                                                                                                                                        Cleavage-site
                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                   Synthetic Asp2
                                                                                                                                                                                                                                                                                                                  24-OCT-2001
                                                                                                                                                                                                                                                                                                                                               AAU06627
                                                                                                                                                                                                                                                                                                                                                                           AAU06627 standard; Peptide; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 10; Page 84; 185pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-483072/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bienkowski MJ, Gurney
                              09-MAY-2001; 2001WO-IB00798
                                                                                            WO200149098-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GURN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (BIEN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NLDA 4
||||
4 NLDA 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ') BIENKOWSKI M J.
') GURNEY M E.
') HEINRIKSON R L.
') PARODI L A.
') YAN R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA,
                                                                                                                                                                                                                        Abeta;
                                                                                                                                                                                                                                                                                 recognition site from APP-SW.
                                                                                                                                          Location/Qualifiers
                                                                                                                      /label= Asp2_protease_cleavage_site
                                                                                                                                                                                                                       APP-SW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 20; DB
100.0%; Pred. No. 92;
Live 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Heinrikson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Parodi LA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 10;
                                                                                                                                                                                                                                    Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aspartyl
beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of Asp2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
Best Loc
Matches
                                    Query Match
                                                                                                                                                                                                                                                                      transmembrane domain and the Asp2 protein, and where the polypeptide and the fragment retain the beta-secretase activity of the mammalian Asp2 protein. The invention also details polynucleotides for the Asp proteins and vectors expressing them, and a polypeptide (isoform of amyloid protein precursor (APP)) comprising the amino acid sequence of an APP or its fragment containing an APP cleavage site recognizable by a mammalian beta-secretase, and further comprising two lysine residues at the carboxyl terminus of the amino acid sequence of the mammalian APP or APP fragment. Also included in the invention are methods of identifying modulators or inhibitors of Asp2. Modulators and inhibitors of Asp2 are useful for treating Alzheimer's disease. APP is useful in methods for identifying inhibitors or modulators of human Asp2 activity and amyloid-beta (Abeta) peptide production. APP is also useful in designing therapeutics for the treatment or prevention of Alzheimer's disease.
                                                                                                                         APP comprising the APP-Sw-beta-secretase peptide sequence (NLDA), which is associated with increased levels of Abeta processing is useful in assays relating the Alzheimer's research. The expression vector is useful for recombinantly expressing APP. Nucleic acids that hybridise to Asp oligonucleotides are useful as probes or primers. The probes are useful for detecting Hu-Asp nucleic acids in vitro assays and in Northern and Southern blocs. The present sequence is an synthetic peptide substrate for Asp2 corresponding to the APP swedish mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BIEN/)
(GURN/)
(HEIN/)
(PARO/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mammalian aspartyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel purified polypeptide comprising fragment of protease 2, lacking Asp2 transmembrane domain and secretase activity of Asp2 useful for identifying activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bienkowski MJ,
                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI;
                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-502549/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BIENKOWSKI M J.
GURNEY M E.
 4;
                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HEINRIKSON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YAN R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PARODI L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page
                                                                          10
 100.0%; ilarity 100.0%; Conservative (
                                                                          AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          relates to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          84; 185pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gurney ME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a purified polypeptide comprising a fragment of ase (Asp)2 protein which lacks the Asp2
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Heinrikson RL,
 Score 20; DB;
Pred. No. 92;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Parodi LA,
                                      22;
   0
                                    Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  retaining beta inhibitors of Asp2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mammalian
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yan
   0
 Gaps
```

```
밁
                     Ωy
RESULT 31
                  1 NLDA 4
             4 NLDA
              7
```

```
AAU07226
AAU07226;
                 AAU07226 standard;
                 Peptide;
                 10
```

```
24-OCT-2001
               (first
               entry)
```

Human beta-amyloid protein precursor, APP-Sw beta-secretase site.

```
aspartyl protease 2; Asp2; a
beta-secretase; Alzheimer's
                         Human; aspartyl protease 1; Asp-1;
aspartyl protease 2; Asp2; amyloid
                                                nootropic; neuroprotective;
                         protein
                       precursor;
```

Homo sapiens.

WO200149097-A2

```
RESULT 32
AAE02605
ID AAE02
XX AAE02
XX AAE02
XX IO-AU
DT 10-AU
XX Human
XX Human
KW Alzhe
KW Alzhe
XXX ALSH
OSS HOmo
                                                                                                                                                                                                                                                                                                                                                                                       Дb
                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to a novel purified polypeptide comprising a CC fragment of mammalian aspartyl protease 2 (Asp2) protein which lacks the Asp2 transmembrane domain and the Asp2 protein, and where the polypeptide CC and the fragment retain the beta-secretase activity of the mammalian Asp2 CC protein. Also included is an isoform of amyloid protein precursor (APP) CC comprising the amino acid sequence of a APP or its fragment containing CC an APP cleavage site recognisable by a mammalian beta-secretase, and CC further comprising two lysine residues at the carboxyl terminus of the CC amino acid sequence of the mammalian beta-secretase, and CC activity; identifying agents that inhibit the APP processing activity of App2 agents that inhibit the APP processing activity CC of human Asp2 aspartyl procease (Hu-Asp2); identifying agents that cCC amyloid beta (Abeta) from APP. Agents identified by the above methods CC are useful for treating Alzheimer's disease; and for Identifying cdistantors of amyloid-beta (Abeta) apptide production, for use in CC disease. Probes and primers derived from Asp nucleic acid sequences are useful for aftering the App and activity in the APP color of Alzheimer's color of the APP color of Alzheimer's color of APP and the APP and the APP and the APP and 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                            Human; alpha-secretase; amyloid precursor protein; APP;
                     Homo sapiens
                                                             beta-secretase;
                                                                               Alzheimer's disease; antialzheimer's;
                                                                                                                                                Human APP-Sw
                                                                                                                                                                                            10-AUG-2001
                                                                                                                                                                                                                                                                       AAE02605 standard; peptide; 10 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          are useful for detecting Hu-Asp nucleic acids in in vitro assays and in Northern and Southern blots. The present sequence represents the amino acid sequence of human amyloid protein precursor, APP-Sw,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel purified polypeptide comprising fragment of protease 2, lacking Asp2 transmembrane domain and secretase activity of Asp2 useful for identifying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (BIEN/)
(GURN/)
(HEIN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               beta-secretase site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bienkowski MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (YANR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-MAY-2001; 2001WO-IB00797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-JUL-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (PARO/)
                                                                                                                                                                                                                                                                                                                                                                                                           1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                       NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-502548/55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GURNEY M E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YAN R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HEINRIKSON R L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PARODI L A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                          beta-secretase substrate peptide mutant, PHA-247574E
                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001WO-IB00797.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         84; 185pp; English.
                                                           mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gurney ME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Heinrikson RL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                            aspartyl protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Parodi LA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mammalian aspartyl retaining beta inhibitors of Asp2
                                                                                                therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yan
                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
밁
                                                                                                                                                                                                                                                                                         ğ
                                                                                                                                                                                                                                                                                                                                                                  AAB47266
                                                                                                                                                                                                                                RESULT 33
                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                Best
                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                           The present invention relates to enzymes for cleaving the alpha-
secretase site of the amyloid precursor protein (APP) and methods of
identifying those enzymes. The methods may be used to identify enzymes
that may be used to cleave the alpha-secretase cleavage site of the APP
protein. The enzymes may be used to, treat or modulate the progress of
Alzheimer's disease. The present sequence is human amyloid precursor
protein (APP)-Swedish (Sw) beta-secretase specific substrate peptide
mutant, PHA-247574E. This peptide is obtained by Swedish KM-NL mutation.
The peptide is used for assaying the beta-secretase activity of human
Aspartyl protease 2a (Asp2a) protein. The peptide is also used for
determining the relationship between Aspartyl protease 1 (Asp1) and
                                                                           Beta-secretase; isotype; beta-amyloid precursor protein; APP; beta-amyloid peptide; beta-AP; Alzheimer's disease; Downs syrHCHWA-D; Swedish mutation; maltose binding protein; MBP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-SEP-1999;
23-SEP-1999;
13-OCT-1999;
06-DEC-1999;
                                                         Synthetic
                                  US6221645-B1
                                                                                                                                Peptide 5-5'SW,
                                                                                                                                                        18-JUL-2001
                                                                                                                                                                                 AAB47266;
                                                                                                                                                                                                        AAB47266 standard;
                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 12; Page 85; 189pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Enzymes that cleave the alpha-secretase site of the amyloid precursor protein, useful for the treatment of Alzheimer's disease -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-APR-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cleavage-site
Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (PHAA ) PHARMACIA & UPJOHN CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200123533-A2
                                                                                                                                                                                                                                                                                1 NLDA 4
                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                   4 NLDA
                                                                                                                                                                                                                                                                                                                                                                                       protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-290516/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ×
                                                                                                                                                                                                                                                                                                                  4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bienkowski MJ;
                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                       (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000WO-US26080
                                                                                                                                                                                                                                                                                                                                                                ΑĀ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99US-0155493.
99WO-US20881.
99US-0416901.
99US-0169232.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note-
                                                                                                                              for used in beta-secretase assay.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "Wild type
                                                                                                                                                                                                       Peptide;
                                                                                                                                                        entry)
                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Wild type
                                                                                                                                                                                                        10
                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                           Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Met substituted with Leu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lys substituted with
                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                      22;
                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                      Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Asn"
                                                                                          syndrome;
                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                              0;
```

```
RESULT 34
AAB66575
ID AAB66
XX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       concaining the cleavage sites derived from wild-type beta-amyloid precursor protein (APP). These peptides were used in assays utilising partially purified beta-secretase to identify beta-secretase inhibitors. Beta-secretase is thought to be responsible for the pathogenic processing of APP to form beta amyloid peptide (beta-AP) in beta-AP related conditions, e.g. Alzheimer's disease, Downs syndrome, HCHWA-D etc. Beta-secretase has a molecular weight of 260-300 kD and will bind to wheat germ agglutinin but not to concanavalin A. Beta-secretase will cleave both the wild type and the Swedish muta+ian
                                                                                                                                                                                                                    28-JUN-1999;
30-NOV-1999;
25-JAN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel antibody that specifically binds native beta-secretase protein, useful for raising anti-idiotypic antibodies and for detecting or diagnosing pathological conditions related to presence of respective
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example; Column 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antigens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-315578/33
                                                                                                                                                                                                                                                                                                                                                           04-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB66575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chrysler SMS,
                       WPI; 2001-137933/14
                                                                                                                                                                             27-JAN-2000;
08-JUN-2000;
                                                                                                                                                                                                                                                                                                               27-JUN-2000; 2000WO-US17742
                                                                                                                                                                                                                                                                                                                                                                                                    WO200100665-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Memapsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB66575 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ELAN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | | | | | NLDA
                                                                JJN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        memapsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ELAN
                                                                                                            OKLAHOMA MEDICAL RES UNIV ILLINOIS FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2; nootropic; neu:
apsin 2 inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10
                                                              Hong L,
                                                                                                                                                                        99US-0141363.
99US-0168060.
2000US-0177836.
2000US-0178368.
2000US-0210292.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               larity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sinha S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95US-0480498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96US-0660531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           derived
                                                                Ghosh AK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        neuroprotective; amyloid precursor protein;
tor; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Keim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                 FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APP beta-secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Anderson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JÞ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Η,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               McConlogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
The present sequence is given in a specification relating to an inhibit of catalytically active memapsin 2. The inhibitor binds to the memapsir active site, which is defined by the presence of two catalytic aspartic residues and a substrate binding cleft. The inhibitor is useful for the treatment and diagnosis of Alzheimer's disease. It is useful in screens for individuals with a genetic predisposition to Alzheimer's disease. The inhibitor is useful as a reagent for specifically binding memapsin 2 or memapsin 2 analogues and for adding in memapsin 2 isolation, purification and characterisation.
                                                                                                                                                                                                                                                                                                                      Novel memapsin 2 inhibitors which bind to active site of memapsin; having 2 catalytic aspartic residues and substrate binding cleft, to treat Alzheimer's disease by blocking amyloid precursor protein
Sequence
                                                                                                                                                                                                                                                          Disclosure; Page
10
ĀΑ;
                                                                                                                                                                                                                                                             11;
                                                                                                                                                                                                                                                          English
                                                                                                                                                                                        the memapsin
                                                                                                                                                                      aspartic
                                                                                                                                                                                                                  inhibitor
                                                                                                                                                                                                                                                                                                                                                 used
                                                                                    ç
```

RESULT 35 AAB61337 Matches Local 4 1 NLDA 4 NLDA 4; Similarity 7 Conservative 100.0%; 0; Score Pred. Mismatches No. DВ 92; 0; Indels 0; Gaps

밁 Ş

Query Match

22;

Length

10;

0

02-APR-2001 Unidentified Memapsin 2; catalyst; Swedish mutation AAB61337 standard; (first entry) peptide from beta peptide; 10 Alzheimer's amyloid precursor

Tang 04-JAN-2001 28-JUN-1999; 30-NOV-1999; WO200100663-A2 25-JAN-2000; 27-JAN-2000; (OKLA-) 27-JUN-2000; JJN, OKLAHOMA MEDIÇAL RES Lin 99US-0141363. 99US-0168060. 2000US-0177836. 2000US-0178368. 2000US-0210292. 2000WO-US17661 × Koelsch ດ FOUND

Purified recombinant catalytically active memapsin 2, inhibitors of it, which are used to treat and prevent Alzheimer's

WPI;

2001-102885/11.

Claim 6; Page 11; 86pp; English.

The present invention relates to a purified recombinant catalytically active memapsin 2. The invention may be used to inhibitors which are used to treat or prevent Alzheimer's disease. The invention may also be used to a for individuals more genetically prone to develop Alzheimer's be used to screen

밁

```
RESULT 36
ANU99491
ID ANU99491
YX ANU99
XX ANU99
XX ANU99
XX ANU99
XX O7-OC
XX O7-OC
XX Human
KW 15-JA
PR 28-JU
PR 28-FE
XX 28-JU
PR 28-FE
XX 10-INX
PR 27-JU
PR 11-INX
PR 27-JU
PR 28-FE
PR 27-JU
PR 28-FE
PR 27-JU
PR 28-FE
PR 28-
ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SS
                                                                         Query Match
Best Local (
                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                purified, recombinant catalytically active, memapsin 2 (beta secretase). Memapsin 2, a member of the aspartic protease family, cleaves beta-amyloid precursor protein (APP) found in amyloid plaques. The recombinant memapsin 2 is useful for identifying inhibitors of memapsin 2 in the design of drugs for the treatment and/or prevention of Alzheimer's disease. The recombinant memapsin 2 can be used to immunise against Alzheimer's disease. The present sequence represents a peptide used as a substrate for human memapsin 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-NOV-1999;
25-JAN-2000;
27-JAN-2000;
                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to methods for the production of purified, recombinant catalytically active, memapsin 2 (beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New recombinant catalytically active memapsin 2, useful to screen for inhibitors of memapsin 2 which can be used to prevent and treat Alzheimer's disease -
                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 6; Page 30; 44pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tang JJN, Lin X, Koelsch G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (LINX/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TANG/) TANG J J N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-FEB-2001; 2001US-0796264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-APR-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US2002049303-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; memapsin 2; beta secretase; aspartic protease; APP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HONG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    beta-amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU99491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU99491 standard; peptide;
                                               Local Similarity es 4; Conserv
1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 NLDA 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2002-507280/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ) LIN X.
) KOELSCH G.
) HONG L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #2 used as substrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                             10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-168060P.
2000US-177836P.
2000US-178368P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0604608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               precursor protein; amyloid plaque; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                             A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-141363P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nootropic.
                                                              100.0%;
                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 20; DB
Pred: No. 92;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for human memapsin
                                                                    Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hong L;
                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . рв
. 92;
                                                                                          DB
                                                                                          23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22;
                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                        Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 10;
                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
RESULT 37
ABB78614
CC substrate (I) which comprises a human aspartyl protease 1 (hu-Aspl) CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-CC and which comprises the 8 amino acid sequence Gly-Leu-Ala-Leu-Ala-Leu-CC Glu-Pro. Also described are: (1) a method (II) for assaying hu-Aspl CC proteolytic activity, comprising: (a) contacting a hu-Aspl protein with CC (I) under acidic conditions; and (b) determining the level of hu-Aspl CC proteolytic activity; (2) a purified polynucleotide (III) comprising a concoding strand complementary to a defined 1804 nucleotide sequence (see ABL52456) where the nucleotide sequence encodes a polypeptide having CC Aspl proteolytic activity and lacks nucleotides encoding a transmembrane cdomain); (3) a purified polynucleotide (III) comprising a sequence that hybridises under stringent conditions to (III) (the nucleotide sequence encodes a polypeptide further lacking a pro-peptide domain corresponding comprising (III) or (III); and (5), a host cell (V) transformed or CC comprising (III) or (III') and/or (IV). The hu-Aspl protease cutvity protease activity, (II) and therefore diagnose diseases. Hu-Aspl has been localised to chromosome 21, while cut sequence represents a beta-secretase specific substrate peptide which is cused in an example from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-SEP-1999;
23-SEP-1999;
23-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human aspartyl protease 1 substrates useful in assays to detect aspartyl protease activity, e.g. for the diagnosis of Alzheimer's disease -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bienkowkski MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13-OCT-1999;
06-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GB2367060-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABB78614 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PHAA ) PHARMACIA & UPJOHN CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-OCT-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-MAR-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 proteolytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; Asp-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Beta-secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABB78614;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2002-396337/43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 92; 182pp; English,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001GB-0025934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000GB-0023315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-155493P.
99US-0404133.
99WO-US20881.
99US-0416901.
99US-169232P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Asp-2; aspartyl protease; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     specific substrate PHA-247574E SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NO:63
```

Query Match
Best Local Similarity
Thes 4; Conserve

Conservative

100.0%; S 100.0%; F itive 0;

Score 20; Pred. No.

Mismatches 92; DB

0,

0,

Gaps

0

Length 10; Indels

Sequence

10

ΑA;

γ

1

4

```
RESULT 38
ABB06425
                                                                                                  망
                      Ş
뭐
                                                Best Loc
Matches
                                                                        Query Match
                                                                                                                                  The present invention describes an isolated peptide (I) comprising a sequence of at least four amino acids, where the peptide is a substrate for conducting aspartyl protease assays. (I) has neuroprotective and nootropic activities, and can be used as an inhibitor of beta-secretase activity. A beta-secretase modulator from the present invention can be used for inhibiting beta-secretase activity in vivo, and in the manufacture of a medicament for the treatment of Alzheimer's disease. Pharmaceutical compositions from the present invention can be used for treating a disease or condition characterised by an abnormal beta-secretase activity of human Asp2 aspartyl protease (Hu-Asp2). (I) is useful as a core structure to construct derivatives. All49914 to ABL49925 and ABB06409 to ABB06593 represent sequences used in the exemplification
                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                  Claim 19;
                                                                                                                                                                                                                                                                                                                                                   Novel substrates for human aspartyl protease useful for identifying modulators of beta secretase activity of aspartyl protease for trea
                                                                                                                                                                                                                                                                                                                                                                                          WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                   Heinrikson
                                                                                                                                                                                                                                                                                                                                                                                                                               Yan R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-JUL-2000; 2000US-219795P.
12-MAR-2001; 2001US-275251P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alzheimer's diseas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human APP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                       (PHAA ) PHARMACIA & UPJOHN CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUL-2001; 2001WO-US23035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24 -JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200206306-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Beta-secretase; enzyme; cleavage site; amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABB06425 standard;
                                                              Local Similarity
                         _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
             NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NLDA
||||A
                                                                                                                                                                                                                                                                                                                                                                                          2002-216995/27.
NLDA
                                                                                                                          present
                                                4.
                                                                                                                                                                                                                                                                                                                                                                                                                   Tomasselli AG,
son RL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7
                                                                                                                                                                                                                                                                                                               Page 84; 188pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Swedish KM-NL mutation beta-secretase cleavage
                                                                                                  10
                                                                                                                                                                                                                                                                                                                                         disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     disease
                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                  ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                neuroprotective; nootropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide; 10
                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                              Gurney
                                                0
                                                            Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                              ME,
                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                              Emmons
                                                                                                                                                                                                                                                                                                                                                                                                                              TL,
                                                                        23;
                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein precursor; APP;
beta-secretase inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                              Bienkowski
                                                                        Length 10;
                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence
                                                                                                                                                                                                                                                                                                                                                     for treating
                                               0;
                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ:19
                                               0;
```

RESULT 39 AAB75142

밁 δÃ

4; Similarity

Conservative

0;

0;

Gaps

0,

```
The present invention describes a method of screening for compounds CC which inhibit Asp 1-mediated cleavage of a polypeptide or protein CC substrate. The method comprises providing a reaction system comprising CC Asp 1 and substrate, and measuring the extent of cleavage of the CC substrate in the presence of test compound compared with that in the CC screening for compounds which inhibit Asp 1 mediated cleavage of a CC polypeptide or protein substrate comprising providing a reaction system CC compared with that in the presence of test compound compared with that in the presence of the test compound cC compared with that in the presence of the test compound CC identified by the method; (3) a pharmaceutical composition comprising the CC compound of (2) and a carrier; (4) a method of inhibiting Asp 1 modulated CC amyloid precursor protein (APP) cleavage, or treating or prophylaxis of beta-amyloid protein-related disease, comprising administering to a CC patient a compound of (2); (5) a compound which is an inhibitor of Asp 1 condulated APP cleavage; and (6) a method for treating or prophylaxis of beta-amyloid protein-related disease comprising administering a compound CC of (2) or (5). The compound which inhibits Asp 1 mediated cleavage of a polypeptide or prophylaxis of beta-amyloid protein is useful in therapy, in the preparation of a cc protein is useful in therapy, in the preparation of a medicament for inhibiting Asp 1-modulated APP cleavage and for the compound which inhibits asp 1 mediated cleavage. Cc including Alzheimer's disease. The present sequence represents an APP CC swedish variant sequence (from P6 to P5') peptide substrate, which can be used in the method of the invention.
Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Identifying inhibitors of Asp 1-mediated cleavage, for treating or preventing beta-amyloid protein-related disease, comprises measuring the extent of substrate cleavage in a reaction system containing Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (SMIK )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Amyloid precursor protein; APP; Asp 1; endocrepsin 1; inhibition; transmembrane aspartyl proteinase; APP Swedish variant; nootropic; neuroprotective; beta-secretase cleavage site; Alzheimer's disease; beta amyloid protein-related disease; antialzheimer.
                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-OCT-2000; 2000WO-GB04028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200131054-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APP Swedish variant sequence (from P6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB75142 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-328654/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMITHKLINE SMITHKLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 24; 31pp; English
                                                                           11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hussain I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                              AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99GB-0025136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BEECHAM PLC.
BEECHAM CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide;
                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Powell DJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11
Score 20; DB 22;
Pred. No. le+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P5') peptide substrate SEQ:2.
                                  Length 11;
```

뫄 δÃ

Query Match

100.

DB

```
C compound of (2) and a carrier: (4) a method or protein gub reaction system c compound of (2) and a carrier: (4) a method or inhibitor of amplied protein compound; (2) a compound of (2) and a carrier: (4) a method of inhibiting Asp 1 modulated disease, comprising are prophylaxis of c compound of (2) and a carrier: (4) a method of inhibiting Asp 1 modulated amyloid protein-related disease, comprising administering to a c c modulated active related disease, comprising administering to a c c modulated approtein related disease, comprising administering to a c c modulated App cleavage; and (6) a method for treating or prophylaxis of c modulated App cleavage; and (6) a method for treating or prophylaxis of c beta-amyloid protein-related disease comprising administering a compound c (2); (5) a compound which is an inhibitor of Asp 1 c mediated App cleavage; and (6) a method for treating to compound c (2); (5) a compound which inhibits Asp 1 mediated cleavage of a c (2) or (5). The compound which inhibits Asp 1 mediated cleavage of a c mediament for inhibiting Asp 1-modulated App cleavage and for the c compound c c including Alzheimer's disease. The present sequence represents an Asp 1 and the compound control of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 40
AAB75145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes a method of screening for compounds which inhibit Asp I-mediated cleavage of a polypeptide or protein substrate. The method comprises providing a reaction system comprising Asp I and substrate, and measuring the extent of cleavage of the substrate in the presence of test compound compared with that in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         presence of the test compound. Also described are: (1) a method of screening for compounds which inhibit Asp 1 mediated cleavage of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Identifying inhibitors of Asp 1-mediated cleavage, for treating or preventing beta-amyloid protein-related disease, comprises measuring the extent of substrate cleavage in a reaction system containing Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Amyloid precursor protein; APP; Asp 1; endocrepsin 1; inhibition; transmembrane asparty1 proteinase; APP Swedish variant; nootropic neuroprotective; beta-secretase cleavage site; Alzheimer's diseas beta amyloid protein-related disease; antialzheimer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-OCT-2000; 2000WO-GB04028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200131054-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Asp 1 substrate sequence SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB75145 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a substrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMITHKLINE BEECHAM
                                                                         sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hussain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99GB-0025136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "N-terminally attached to maltose binding protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MBP)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Powell DJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ID NO:4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 comprising
```

Sequence

11

A

밁 δã

G

NLDA

```
RESULT 41
AAB977469
AID 97469
AXX AAB97
XX AAB97
XX AAB97
XX AASP2
XX ASP2;
XX ASP2;
XX ASP2;
XX ASP2;
XX ASP2;
XX ASP2
XX Unide
XX WO20C
PM WO20C
PM WO20C
PM SCREE
PT SCREE
PT SCREE
PT CCMIN
XX (SMIN
YAX (SMIN
YAX ABSE
PT CCMIN
XX (SMIN
YAX (SMI
                                                                            Query Match
Best Local
                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                     The present invention describes a method of screening for compounds withhibit Asp2 (also known as memapsin 2 and endocrepsin 2) mediated cleavage of a protein substrate, involving measuring the extent of cleavage of the substrate in the presence and absence of the test compound. Asp2 is thought to be involved in the cleavage of amyloid precursor protein which is excised to produce beta-amyloid. Beta-amyloid is involved in the pathogenesis of |Alzheimer's disease, Parkinson's disease, cortical Lewy body disease and vascular and cerebrovascular diseases, and Asp2 inhibitors could be useful in their treatment. The
                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Screening for inhibitors of Asp 2 mediated polypeptide cleavage comprises measuring substrate cleavage or ligand binding with a systemperising Asp 2 and a substrate of labelled ligand in the presence absence of a test compound -
                                                                                                                                                                                         present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 3; Page 26; 34pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-300381/31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Christie G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19-OCT-2000; 2000WO-GB04039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200129563-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB97469;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB97469 standard; Protein;
                                                                       Local
1 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          substrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NLDA 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           endocrepsin 2;
                                                 4;
                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMITHKLINE
SMITHKLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4;
                                                                                                                                            11
                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hussain I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              test compound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                            Ã,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99GB-0024957.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Swedish variant
                                                                                                                                                                                    is an example of an Asp2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifier's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /label= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BEECHAM
                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                memapsin 2; be cortical Lewy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "optionally, bound to maltose binding protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Powell DJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLC.
CORP.
                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                     Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 20;
Pred. No.
                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      beta-amyloid protein;
                                                                       NO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                body disease;
                                                                     1e+02;
                                                                                        DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1e+02;
                                                                                                                                                                                      substrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22;
                                              0;
                                                                                      Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Parkinson's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11;
                                                                                                                                                                                                                                                                             Beta-amyloid
                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  system
                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
RESULT 42
AAM52699
                              ABB08996
ID ABB(
                                                                                                                                                                                     á
                                                                                        망
XXX
                                                      RESULT 43
                                                                                                                                       Best Loc
Matches
                                                                                                                                                             Query Match
                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                     The invention relates to novel amine compounds which are beta-secretase inhibitors. The beta-secretase compounds also have the ability to promote amyloid precursor protein alpha secretion and to inhibit beta amyloid protein production. The beta-secretase inhibitors of the
                                                                                                                                                                                                                                                                                                                                                                                                            Miyamoto M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              beta amyloid protein production; head injury; spinal inj
amyloid precursor protein alpha secretion; nerve damage;
meningitis sequela; cerebral paralysis; memory disorder;
         ABB08996;
                                                                                                                                                                                                          sequelae of meningitis, cerebral paralysis, memory disorders diseases. The present sequence represents a beta-secretase supertide used in the exemplifications of the invention.
                                                                                                                                                                                                                                                                                                                                           Beta-secretase inhibitor used 
injury to brain or spine, and 
compound -
                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-MAY-2000; 2000JP-0152758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAM52699 standard; peptide; 11 AA
                                ABB08996 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                  (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-MAY-2001; 2001WO-JP04144.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200187293-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mental disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Beta-secretase substrate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Beta-secretase substrate peptide.
                                                                                                                                                                                                                                            invention can be used for treating head or spinal injuries, nerve damage,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-FEB-2002
                                                                                          4
                                                                                                                                                Local Similarity
                                                                                                               1 NLDA 4
                                                                                        NLDA
                                                                                                                                                                                                                                                                                                                                                                                     2002-055640/07.
                                                                                                                                                                                                                                                                                                               Page 66; 86pp; Japanese
                                                                                                                                                                                     11
                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                            Matsui J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nootropic; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Lys(Dnp)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "Nma-Ser"
                               peptide;
                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "C-terminal amide"
                                                                                                                                                                                                                                                                                                                                                                                                            Fukumoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inhibitor;
                               12
                                                                                                                                     0
                                                                                                                                                Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                 for treating e.g. Alzheimer's disease and neurodegeneration, comprises amine
                               B
                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                            Ή
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   amine compound
                                                                                                                                                                                                                                                                                                                                                                                                            Tarui
                                                                                                                                                ; DB 23;
. 1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                            z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cerebroprotective
                                                                                                                                     0;
                                                                                                                                                           Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       injury;
                                                                                                                                    0;
                                                                                                                                                                                                                                 and mental
                                                                                                                                    Gaps
                                                                                                                                    0;
```

```
RESULT 44
ABB07591
ID ABB07
XX
AC ABB07
XZ
DT 08-MA
XX
DE Bioti
XX
KW APP;
KW amylc
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                     deposits in brain, and for producing beta-secretase complexes. I sequence represents an amyloid precursor protein substrate that cleaved by beta secretase. This substrate is used to assay
                                                                                                                                                                                                                                                                                                                                                                                         syndrome, cerebral amyloid angiopathy, dementia associated with Parkinson's disease, dementia associated with progressive supranuclear palsy, and dementia associated with cortical basal degeneration.
                                                                                                                                                                                                                                                                                                                                                                                                                              antiparkinsonian in their action. They are used in the preparation of a composition useful for treating, preventing or delaying the on-set of Alzheimer's disease, for treating mild cognitive impairment, Down's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Amyloid precursor protein; APP; Alzheimer's disease; nootropic; neuroprotective; cerebroprotective; haemostatic; antiparkinsonian; Down's syndrome; cerebral amyloid angiopathy; dementia.
                                         Biotinylated
                                                                   08-MAY-2002
                                                                                              ABB07591;
                                                                                                                       ABB07591 standard; peptide; 12
                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      are nootropic, neuroprotective, cerebroprotective, haemostatic and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This invention relates to substituted amines and their salts, which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example B; Page 94; 136pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New substituted amines are e.g. beta-amyloid peptide inhibitors, useful for treating Alzheimer's disease, mild cognitive impairment and Down's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JUN-2000; 2000US-215323P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200202505-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
Modified-site
                                                                                                                                                                                                                                                                                                                          beta-secretase activity.
                                                                                                                                                                                                                                                                                                                                                                             They are also useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ELAN-) ELAN PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-JUN-2001; 2001WO-US20852
                                                                                                                                                                                           4
                                                                                                                                                                                                        NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LY,
                                                                                                                                                                                           NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-171625/22
                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hom R,
                                                                                                                                                                                                                                                                                                 12
                                                                                                                                                                                                                                          100.0%; ilarity 100.0%; Conservative
                                         synthetic APP substrate.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                  (first entry)
                                                                                                                                                                                                                                                                                                 ΑĄ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note=
10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein substrate
                                                                                                                                                                                                                                                                                                                                                                 for treating diseases characterised by beta-amyloid nd for producing beta-secretase complexes. This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Oregon green covalently linked"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "N-terminal biotin"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Maillaird
                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                         Score
Pred.
                                                                                                                       AA.
                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                         20;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X
                                                                                                                                                                                                                                                        1.1e+02;
                                                                                                                                                                                                                                                                     DB 23;
                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                       12;
                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                 Down's
                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                    эd
```

APP; amine derivative; beta-secretase; amyloid precursor protein; amyloid beta peptide; beta-amyloid; nootropic; neuroprotective;

beta;

0,

```
RESULT 45
AAE16656
ID AAE16
XX
AC AAE16
XX
DT 09-AP
XX
DE APP SI
                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                     activity or inhibit the cleavage of amyloid precursor protein (APP) in a certain mixture. They can also be used to inhibit production of amyloid beta peptide (A beta) in a cell or inhibit production of beta-amyloid complete in an animal. The amine derivatives are useful for treating or preventing a disease characterized by beta-amyloid deposits in the brain ce., for treating or preventing a preventing a disease characterized by beta-amyloid deposits in the brain ce., for treating or preventing aliaease (AD), for helping ce prevent or delay the onset of AD, for treating mild cognitive impairment (MCI), preventing or delaying the onset of AD in those who would progress cerebral haemorrhage with the Amyloidosis of the Dutch type, cerebral amyloid angiopathy and preventing its potential consequences i.e. single dementias, including dementias of mixed vascular and degenerative origin, cerebrative appropriated with Parkinson's disease, dementia associated with cerebratian consequences in the preventing cerebratian associated with parkinson's disease, dementia associated with associated with cerebratian consequences. Sequences cerebrase and are used to assay beta-secretase activity in the presence of the inhibitory commonds of the presence.
                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                              Query Match
     APP substrate peptide #1 used
                                    09-APR-2002
                                                                                    AAE16656 standard; peptide; 12 AA.
                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rormulae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ELAN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-JUN-2000;
29-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-JUL-2001; 2001WO-US21000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200202520-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cerebroprotective;
                                                                                                                                                            4
                                                                                                                                                                                                                    Local Similarity es 4; Conserv
                                                                                                                                                                                         1 NLDA 4
                                                                                                                                                               NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ELAN PHARM INC
PHARMACIA & UP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gailunas A,
                                                                                                                                                                                                                                                                          12
                                                                                                                                                                                                                    Conservative
                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     their salts.
                                                                                                                                                                                                                                                                          ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-215323P.
2001US-0895843.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note=
10..11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 haemostatic; antiparkinsonian.
                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     прлони со
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          286pp; English
                                                                                                                                                                                                                                                                                                inhibitory compounds of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            to disubstituted amine derivatives of specified ts. The amine derivatives can inhibit beta-secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hom R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "covalent attachment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "N-terminal biotin'
                                                                                                                                                                                                                  0;
     ŗ,
                                                                                                                                                                                                                                Score 20;
Pred. No.
                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jagodzinska B,
cell free inhibition assay
                                                                                                                                                                                                                           DB 23;
1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oregon green"
                                                                                                                                                                                                                                          Length 12;
                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Maillaird
                                                                                                                                                                                                              0;
                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X
                                                                                                                                                                                                            0;
```

QΥ

B Qy

Search completed: February Job time: 28.8333 secs

6

2003,

11:19:42

```
The invention relates to disubstituted amine derivative compounds CC useful for treating Alzheimer's disease and other degenerative diseases. CC Compounds of the invention possess| beta secretase inhibitory activity and CC are useful for inhibiting beta-secretase mediated cleavage of amyloid CC precursor protein (APP) and particularly, to inhibit the production of CC amyloid beta (A beta) peptide. They are useful for treating or preventing CC a disease characterised by beta-amyloid deposits in the brain e.g. for CC treating or preventing Alzheimer's disease (AD), for helping to prevent CC or delay the onset of Alzheimer's disease, for treating mild cognitive impairment (MCI), Down's syndrome, hereditary cerebral haemorrhage with the amyloidosis of the Dutch type, cerebral amyloid angiopathy and CC preventing its potential consequences i.e. single and recurrent lobar haemorrhages, for treating other degenerative dementias including CC ementias of mixed vascular and degenerative origin, dementia associated CC supranuclear palsy, dementia associated with progressive compounds of the palsy dementia associated with progressive palsy, dementia associated with corrical basal degeneration of app substrate used to assay beta-secretase activity in the presence of absence of inhibitory compounds of the invention.
                                                                                                             Matches
                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New disubstituted amine derivatives, disease and other degenerative disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example B; Page 160; 286pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2002-122550/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUN-2000; 2000US-215323P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-JUN-2001; 2001WO-US20856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disubstituted amine derivative; Alzheimer's disease; Down's syndrome; degenerative disease; beta-amyloid deposit; mild cognitive impairment; hereditary cerebral haemorrhage; amyloidosis; degenerative dementia; cerebral amyloid angiopathy; Parkinson's disease; supranuclear palsy; cortical basal degeneration; AD; MCI; amyloid precursor protein; APP substrate; beta-secretase; amyloid beta peptide; A beta peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ELAN-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200202518-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Modified-site
                                                                                                                                       Local
  4
                                                      ᆫ
                                                 NLDA
NLDA
                                                                                                          Similarity 4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ELAN PHARM INC.
PHARMACIA & UPJOHN CO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gailunas A,
                                                                                                                                                                                                                     12
                                                                                                       100.0%; ilarity 100.0%; Conservative (
                                                                                                                                                                                                                     ΑĄ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Oregon green labelled Arg"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Biotin labelled"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'n
                                                                                                       0;
                                                                                                                         Score
Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jagodzinska B,
                                                                                                       Mismatches
                                                                                                  No. 1.1e+02;
matches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               treating
                                                                                                                                                      Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ۷,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maillaird M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alzheimer's
                                                                                                  0;
                                                                                               Gaps
                                                                                               0;
```

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                        Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                         Score
      Issued_Patents_AA:*
1: /cgn2_6/ptodata/1,
2: /cgn2_6/ptodata/1,
3: /cgn2_6/ptodata/1,
4: /cgn2_6/ptodata/1,
5: /cgn2_6/ptodata/1,
6: /cgn2_6/ptodata/1,
                                                                                                                                                                                                                                                                                                                                                                        Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT943-6
20
1 nlda 4
     1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
Gapop 10.0 , Gapext 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  February 6, 2003, 11:16:04; Search time 9.33333 Seconds (without alignments) 12.610 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  262574 seqs, 29422922 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                        Length
      GenCore version 5.1.3 (c) 1993 - 2003 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                         DB
  US-09-548-372D-66
US-09-548-36D-66
US-09-548-36D-66
US-08-659-984A-14
US-08-660-531-14
US-08-660-531-19
US-08-660-531-19
US-08-659-984A-19
US-09-548-367D-63
PCT-US94-07043A-3
US-09-548-372D-63
PCT-US94-07043A-3
US-08-659-984A-18
US-08-659-984A-17
US-08-659-984A-17
US-08-659-984A-17
US-08-659-984A-17
US-08-659-984A-17
US-08-659-984A-17
US-08-659-984A-17
US-08-431-328-18
US-08-431-328-18
US-08-431-328-18
US-08-631-328-18
US-08-659-984A-16
US-08-659-984A-16
US-08-659-984A-16
US-08-659-984A-16
                                                                                                                                                                                                                                                                                                                                                                      ij
                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
Sequence 66, Appl
Sequence 2, Appli
Sequence 2, Appli
Sequence 14, Appl
Sequence 2, Appli
Sequence 29, Appli
Sequence 19, Appl
Sequence 63, Appl
Sequence 63, Appl
Sequence 63, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 112, Appl
Sequence 117, Appl
Sequence 118, Appl
                                                                                                                                                                                                                                                                                                                                                                      Description
```

RESULT 2 US-09-548-3 Sequence Patent NG GENERAL 1 APPLICABA ITITLE OF ITITLE OF ITITLE OF UTITLE	Query M Best Lo Matches Qy 1	RESULT 1 US-09-548-372 Sequence 66 Fatent No. GENERAL INF GENERAL INF APPLICANT: TITLE OF I FILE REFER CURRENT APPL PRIOR FILI PRIOR FILI PRIOR APPL PRIOR APPL PRIOR APPL PRIOR APPL PRIOR FILI ORGANISM: SEQ ID NO 6 LENGTH: 4 TYPE: PRI ORGANISM: FEATURE: GTHER INF	3 2 2 2 2 2 2 2 2 4 4 4 4 4 4 4 4 4 4 4
SSULT 2 3-09-548-367D-66 3-09-548-367D-66 3-09-548-367D-66 3-09-548-367D-66 3-09-548-367D-68 GENERAL INFORMATION: APPLICANT: GURNEY ET AL. TITLE OF INVENTION: ALZHEIM TITLE OF INVENTION: THEREO FILE REFERENCE: 29915/6280H CURRENT APPLICATION NUMBER: CURRENT FILING DATE: 2000- PRIOR APPLICATION NUMBER: U	atch cal Simi 4; NLDA 4 NLDA 4	O9-548-372D-66 -09-548-372D-66 Sequence 66, Application US/09 Patent No. 6420534 GENERAL INFORMATION: APPLICANT: GUNUSY ET AL. TITLE OF INVENTION: ALZHEIMER TITLE OF INVENTION: THEREOF FILLE REFERENCE: 29915/62801 CURRENT APPLICATION NUMBER: US PRIOR FILLING DATE: 1999-09-23 PRIOR APPLICATION NUMBER: US PRIOR FILLING DATE: 1999-09-23 PRIOR FILLING DATE: 1999-09-23 PRIOR APPLICATION NUMBER: US PRIOR FILLING DATE: 1999-09-23 PRIOR FILLING DATE: 1999-09-23 PRIOR APPLICATION NUMBER: US PRIOR FILLING DATE: 1998-09-24 NUMBER OF SEQ ID NOS: 73 SOFTWARE: PATENTIAL OF SEQ ID NOS: 73 SEQ ID NO 66 LENGTH: 4 TYPE: PRI ORGANISM: Artificial sequenc FEATURE: CTHER INFORMATION: Synthetic	20 100.0 20 100.0
ion US/O AL. AL. THEREOF THEREOF 5/6280H NUMBER: 2000-0	100.0%; larity 100.0%; Conservative	tion U. ALZHE ALZHE THER 15/62 NUMBER: 1099-0. UMBER: 1999-0. UMBER: 1999-0. UMBER: 1999-0. UMBER: 1999-0. S: 73 version al sequal	663333444444 663333446642 66337777 433444444444444444444444444444
ASE 8,36	; Score 20; D ; Pred. No. 1. 0; M1smatches	18372D S DISEASE 7,09/548,37 D/155,493 D/404,133 JS99/20881 D/101,594	US-08-659-984A-15 US-08-659-984A-15 US-08-660-531-15 US-08-960-531-345 US-08-924-330A-10 US-09-138-721-10 US-08-370-225-39 US-08-370-225-39 US-08-370-225-39 US-08-461-859-29 US-08-93-10069-29 PCT-US93-10069-30 PCT-US93-10069-30 US-08-995-156A-40 US-08-995-156A-41 US-08-995-156A-86 US-09-419-281-41 US-09-419-281-41
CRETASE,	9e+05; 0;	CRETASE,	TS 1.40 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
APP SUBSTRATES	Length 4; Indels (APP SUBSTRATES	Sequence
res therefor	0; Gaps	THEREFOR	toe 16, Appl toe 15, Appl toe 15, Appl toe 345, Appl toe 345, Appl toe 29, Appl toe 30, Appl toe 29, Appl toe 29, Appl toe 29, Appl toe 29, Appl toe 40, Appl toe 40, Appl toe 41, Appl toe 41, Appl toe 41, Appl
ir and	0;	R AND	1111 Q11111111

4SD

Į.

```
US-08-480-498-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Synthetic peptide US-09-548-367D-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-480-498-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
      Query Match
Best Local Similarity
Matches 4; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2
Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                TELEFAX: 415-326-2422 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US 60/101,594 PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: PCT/US99/20881 PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial sequence
                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 01:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
TELEPAX: 415-326-2422
                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/480,498
                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                              FILING DATE:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Heslin, James M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                  TOPOLOGY:
                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                            NAME: Heslin, James M. REGISTRATION NUMBER: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Townsend and Townsend Khourie and Crew STREET: One Market Plaza, Steuart Tower, Suite 2000 CITY: San Francisco
                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 100 les 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NLDA 4
                                                                                                                                 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/08480498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    California
                                                                                                                                                5 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Anderson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
   100.0%;
llarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sinha, Sukanto
Keim, Pamela S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chrysler, Susanna M.S.
                                                                                                linear
                                                                                 peptide
                                                                                                               single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Beta-Secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              John P.
                                                                                                                                                                                                                                                          29,541
      0;
                                                                                                                                                                                                                                           015270-002200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                     Score 20;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20;
Pred. No.
      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.9e+05;
                                    DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 4;
                   .9e+05;
                                Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 4;
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
```

```
밁
                                                                                                                                                                          US-08-660-531-14
                                                                                                                                                                                           RESULT 5
                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                     US-08-659-984A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
US-08-659-984A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 4
                                                                                                                         Sequence 14, Application US/08660531 Patent No. 6221645 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 14, Application US/08659984A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 415-326-2422 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                           APPLICANT: Anderson, John P.
TITLE OF INVENTION: Beta-Secretase
NUMBER OF SEQUENCES: 21
                                                           APPLICANT: Chrysler, Susanna
APPLICANT: Sinha, Sukanto
APPLICANT: Keim, Pamela S.
APPLICANT: Anderson, John P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 15: TELECOMMUNICATION INFORMATION: TELEPHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 07-JUN-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US 08 FILING DATE: 07-JUN-1995 ATTORNEY/AGENT INFORMATION: NAME: Heslin, James M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 436
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: AS TITLE OF INVENTION: IN NUMBER OF SEQUENCES: 2 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Sinha, Sukanto APPLICANT: Jacobson-Croak,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: TWO
CITY: San I
STATE: Cali
                                                                                                                                                                                                                                        N
                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                      1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NLDA
                                                                                                                                                                                                                                                                                                    4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                                               amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             California
                                                                                                                                                                                                                                                                                                                                                                                                                                               5 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Two Embarcadero Ctr.,
an Francisco
                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Anderson,
                                                                                                                                                                                                                                                                                                                                                                                                 linear
Townsend and Townsend and Crew LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Townsend and Townsend
                                                                                                                                                                                                                                                                                                                                                                                 peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                single
                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Assays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inhibition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  John P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/659,984A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US 08/485,152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29,541
                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kirsten
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15270-002810US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for Detecting Beta-Secretase
                                                                                                                                                                                                                                                                                                                  Score 20; DB 2;
Pred. No. 1.9e+05;
                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Crew LLP
                                                                                                                                                                                                                                                                                                                               Length 5;
                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                  Gaps
```

Two Embarcadero Ctr., 8th Floor

```
RESULT 6
US-09-054-334-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2, Application Patent No. 6329163
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 415-326-2422 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                       ZIP: 94111-3834

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcader Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/480,498
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
NAME: US0145 TEGGA
                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Anderson, John P.
APPLICANT: Jacobson-Croak, Kirsten L.
APPLICANT: Sinha, Sukanto
               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/485,152
FILING DATE: 07-JUN-1995
                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, Version #1.25
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                     STREET: Two Embarcac
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Heslin, James M.
REGISTRATION NUMBER: 29,
REFERENCE/DOCKET NUMBER:
                                                                 CLASSIFICATION: 435
                                                                             APPLICATION NUMBER: US/09/054,334 FILING DATE: 02-APR-1998
                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity les 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
STRANDEDNESS: sin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NLDA 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09054334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 amino acids
                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 20; llarity 100.0%; Pred. No. Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               single
                                                                                                                                                                                                                                                                                                                                                    Assays for Detecting Beta-Secretase Inhibition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/660,531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29,541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15270-002210US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.9e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
```

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                     ; MOLECULE TYPE: peptide US-08-802-981-219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-054-334-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-802-981-219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 21 Patent No.
                                Matches
                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                   TELEFAX: (415) 576-0300 INFORMATION FOR SEQ ID NO: 219:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
                                                                                                                                                                                                                                                       CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Hunter, Tom
REGISTRATION NUMBER: 38,
                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Komoriya, Akira
APPLICANT: Packard, Beverly S.
TITLE OF INVENTION: Compositions for the Detection
TITLE OF INVENTION: Activity in Biological Samples
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 01: TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 576-0200
                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                           STRANDEDNESS
                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 20-FE
                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS
                                                                                                                                                       LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NLDA 4
1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 NLDA 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                219, Application US/08802981
5. 6037137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4; Conservative
                             4;
                                                                                                                                                                                                                                                                                                                                                                                                                               94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          amino acid
                                                                                                                                          amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Heslin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          California
                                                                                                                                                       9 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Two Embarcadero
                             100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Townsend and
                                                                                                                                                                                                                                                                                                               20-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  576-0300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                             us/08/802,981
                                                                                                                                                                                                                                                      38,498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29,541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Townsend and Crew LLP Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             015270-002820US
                                                                                                                                                                                                                                            016865-000300US
                                          Score 20; DB 3;
Pred. No. 1.9e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 20; DB 4;
Pred. No. 1.9e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 5;
                                                      Length 9;
                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of Enzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and Methods of Use Thereof
                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                             Gaps
                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

밁

```
US-08-660-531-19

; Sequence 19, Application US/08660531

; Patent No. 6221645
                                                                                                                                                                                                                                 밁
                                                                                                                                                                                  RESULT 9
                                                                                                                                                                                                                                                                                                                                                             US-08-659-984A-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-659-984A-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 19 Patent No.
                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 415-326-2422 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                              APPLICANT: APPLICANT:
                TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                              APPLICANT:
                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: FLOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
   CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 15
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: AS:
TITLE OF INVENTION: Inl
NUMBER OF SEQUENCES: 2:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                         LOCATION: one-of(1 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
STRANDEDNESS: sir
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Heslin, James M
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 07-JUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 0
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                 4 NLDA 7
                                                                                                                                                                                                                                                               1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                               4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9, Application US/08659984A
5942400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Townsend and Townsend and Crew LLP Two Embarcadero Ctr., 8th Floor
Anderson, John ..
Anderson, John ..
PENTION: Beta-Secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 amino acids
                                                              Sinha, Sukanto
Keim, Pamela S
                                                                                                                                                                                                                                                                                          100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sinha, Sukanto
                                                                                               Chrysler, Susanna M.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jacobson-Croak, Kirsten
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Anderson,
                                                                                                                                                                                                                                                                                                                                                                                           one-of(1)
                                                                                                                                                                                                                                                                                                                                                                                                            Region
                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1-Croak, Kirsten L.
Assays for Detecting Beta-Secretase
                                                                                                                                                                                                                                                                                                                                                                       /note= "N-terminal Ser is acetylated."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inhibition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        John P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US 08/485,152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/659,984A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29,541
                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15270-002810us
                                                                                                                                                                                                                                                                                                         Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                      Length 10;
                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                      0,
```

```
TITLE OF INVENTION: ALLHEIMER'S DISEASE SECRETASE, API
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/62801
CURRENT APPLICATION NUMBER: US/09/548,372D
CURRENT PILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR APPLICATION NUMBER: US 60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
US-09-548-372D-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-660-531-19
                                                                      SEQ ID NO 63
                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Heslin, James M.
REGISTRATION NUMBER: 29,541
REFERENCE/DOCKET NUMBER: 1527
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
TELEPAX: 415-326-2422
INFORMATION FOR SEQ ID NO: 19:
                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 63, Application US/09548372D Patent No. 6420534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                   PRIOR FILING DATE: 19:
NUMBER OF SEQ ID NOS:
                                                                                        SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                APPLICANT: GURNEY ET AL.
             ORGANISM: Artificial sequence
                                  TYPE: PRT
FEATURE:
                                                 ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 0
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION: one-of(1 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: Region rocation: one-of(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS/
SOFTWARE: Patentin Release #1.0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: TWO EMBALCAN CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 NLDA 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                     10
                                                                                        PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Townsend and Townsend
Two Embarcadero Ctr., 8t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          peptide
                                                                                                                          1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "N-terminal Ser is acetylated."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Release #1.0; Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US 08/480,498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/660,531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15270-002210US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and Crew LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 10;
                                                                                                                                                                                                                                                                                                                                             APP SUBSTRATES THEREFOR AND USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Synthetic peptide US-09-548-367D-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Synthetic peptide US-09-548-372D-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-548-367D-63
                                                                                                                                                                                                                                                                                                                                                                                            PCT-US94-07043A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR PELICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR PELICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ouery Match 100.0%; Score 20; DI
Best Local Similarity 100.0%; Pred. No. 24
Matches 4; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                     Sequence 3, Application PC/TUS9407043A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 63, Application US/09548367D Patent No. 6440698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/548,367D CURRENT FILING DATE: 2000-04-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: GURNEY ET AL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: 29915/6280H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 10
TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
                                                                                                                                                                                                                           TITLE OF INVENTION: CAPHEPSIN D IS AN ANYLOIDOGENIC TITLE OF INVENTION: PROTEASE IN ALZHEIMER S DISEASE NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEP: WITT-
 SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION UNIVERSE
                       COMPUTER: Diskette, 3.
COMPUTER: Sharp PC 4600
OPERATING SYSTEM: MS-DOS
SOFTWARE: WORDDAMF
                                                                                                                                                                                                                                                                                                                APPLICANT: Tamburini, Paul P.; Benz, G nter; H bich, APPLICANT: Dieter; Dreyer, Robert N.; Koenig, Gerhar
                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                  CITY: West Haven
                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NLDA 4
                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 NLDA 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NLDA 4
                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                            06516
                                                                                                                                                                  Connecticut
                                                                                                                                                                                                   400 Morgan Lane
                                                                                                                                                 USA
                                                                                                                                                                                                                         Miles Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
PCT/US94/07043A
                                                                                         3.50 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                         800 kb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 4; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APP SUBSTRATES THEREFOR AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
```

```
RESULT 14
US-08-659-984A-18
                                                                                                                   В
                                                                                                                                                 Ω
                                                                                                                                                                                                                                               ; TYPE: PRT ; ORGANISM: Mutant Q1429A RUGT US-09-376-330-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
US-09-376-330-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PCT-US94-07043A-3
Sequence 18, Application US/08659984A Patent No. 5942400 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 35
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 12
LENGTH: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                 Matches
                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 07/880,914
FILING DATE: May 11,1992
ATTORNEY/AGENT INFORMATION:
NAME: Pamela A. Simonton
REGISTRATION NUMBER: 31,060
REFERENCE/DOCKET NUMBER: MTI 22
TELECOMMUNICATION INFORMATION:
TELEPHONE: (203) 937-2340
                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Thomas, David Y.
TITLE OF INVENTION: Method for screening for
TITLE OF INVENTION: UD-glucose:glycoprotein glucosyltransferase (UGGT) activity
TITLE OF INVENTION: and nucleic acid encoding for UGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Tessier, APPLICANT: Dignard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (203) 937-2795
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/376,330 CURRENT FILING DATE: 1999-08-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: 2139-9"US"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: December 16, 1992
PRIOR APPLICATION DATA:
APPLICATION NIMPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: November PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                 1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NLDA 4
                                                                                                                 8 NLDA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENGTH:
                                                                                                                                                                                 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                639932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dignard, Daniel
Bergeron, John J.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09376330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11 amino acids
                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; llarity 100.0%; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     November 12, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      June 21, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Daniel C.
                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCT/US93/10889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 20; DB
Pred. No. 27;
0; Mismatches
                                                                                                                                                                                                  Score 20; DE Pred. No. 47;
                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 11;
                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                 Gaps
                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
```

APPLICANT:

Anderson, John P. Sinha, Sukanto

```
RESULT 15
US-08-802-981-112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-659-984A-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                           Sequence 112, Application US/08802981 Patent No. 6037137
                                                                                                                                                                                                                                APPLICANT: Komoriya, Akira
APPLICANT: Packard, Beverly S.
TITLE OF INVENTION: Compositions
TITLE OF INVENTION: Activity in
NUMBER OF SEQUENCES: 231
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 415-326-2422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 15
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 94111 COMPUTER READABLE FORM:
COMPUTER READABLE Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: Inhibition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Jacobson-Croak, Kirsten L.
TITLE OF INVENTION: Assays for Detecting Beta-Secretase
                                                                                                                                      COUNTRY: USA
ZIP: 94111-3834
                                                                                                                                                                          STREET: Two Embarcae
CITY: San Francisco
STATE: California
                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Heslin, James M
REGISTRATION NUMBER: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/659,984A FILING DATE: 07-JUN-1996 CLASSIFICATION: 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           H: 21 amino acids amino acid
                                                                                                                                                                    California
                                                                                                                                                                                                    E: Townsend and Townsend and Crew LLP Two Embarcadero Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: Townsend and Townsend and Crew LLP
Two Embarcadero Ctr., 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
имьек: US/08/802,981
20-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               single
                                                                                                                                                                                                                                                      Compositions for the Detection of Enzyme
Activity in Biological Samples and Methods of Use Thereof
231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US 08/485,152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29,541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15270-002810US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

```
Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-660-531-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; NAME/KEY: Modified
; LOCATION: 16
; OTHER INFORMATION:
US-08-802-981-112
                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No. 6221645
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 18,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                        CLASSIFICATION: 435
PRIOR APPLICATION UMBER: US 08/
APPLICATION UMBER: US 08/
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
NAME: Heslin, James M.
REGISTRATION NUMBER: 29,54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (415) 576-030 INFORMATION FOR SEQ ID NO:
                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                 MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Chrysler, Susanna
APPLICANT: Sinha, Sukanto
APPLICANT: Keim, Pamela S.
                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Anderso
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                FILING DATE:
                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                    STREET: Two Embarcac
CITY: San Francisco
             REFERENCE/DOCKET NUMBER:
                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                COUNTRY: USA
ZIP: 94111-3834
                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9 NLDA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: amino acid
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Hunter, Tom REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      6221645 deptication US/08660531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4;
                                                                                                                                                                                                                                                                        California
                                                                                                                                                                                                                                                                                                     E: Townsend and Townsend
Two Embarcadero Ctr., 8t
                                                                                                                                                                                                                                                                                                                                                                           Anderson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                 Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (415)
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     576-0300
                                                                                                                                                                                                                                                                                                                                                              Beta-Secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    576-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                  US 08/480,498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /product= "Acp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product=
                                                                                                                                         US/08/660,531
                         29,541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             38,498
                                                                                                                                                                                                                                                                                                                                                                                ס
          15270-002210us
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                016865-000300US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 20; DB
Pred. No. 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Acp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                       end and Crew LLP
8th Floor
                                                                                                                                                                        Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 3; Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

```
B
                         Ş
                                                                                                                       ; TOPOLOGY: 1:
; MOLECULE TYPE:
US-08-659-984A-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 17
US-08-659-984A-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-660-531-18
                                                           Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                               TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTĒRISTICS:
LENGTH: 21 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                           NAME: Heslin, James M.
REGISTRATION NUMBER: 29,541
REFERENCE/DOCKET NUMBER: 15
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 08/485,152
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 07-JUN-
CLASSIFICATION: 436
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                               LENGTH: 30 amino acids
TYPE: amino acid
TYPE: single
TRANDEDNESS: single
25 NLDA 28
                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/0: FILING DATE: 07-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match 100.0%;
Local Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NLDA 4
                             1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/08659984A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: Townsend and Townsend and Crew LLP Two Embarcadero Ctr., 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jacobson-Croak, Kirsten L.
VENTION: Assays for Detecting Beta-Secretase
VENTION: Inhibition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              415-326-2422
                                                          100.0%; Score 20; llarity 100.0%; Pred. No. Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Anderson, John
Sinha, Sukanto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            415-326-2400
                                                                                                                                    peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   John P.
                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/659,984A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                           15270-002810US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                           Mismatches
                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 4;
                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                       Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                          Indels
                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
```

```
RESULT 19
US-09-135-166-17
; Sequence 17, Ap
; Patent No. 6083
                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-433-522A-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 18
                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-433-522A-17
                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 17, Application US/08433522A Patent No. 6013514
                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO: :
                                                                                                                                                                 APPLICANT: APPLICANT:
                                                                    APPLICANT: SIA, DWO YUAN CHARLES
APPLICANT: KLEIN, Michel
TITLE OF INVENTION: HAEMOPHILUS OUTER MEMBRANE PROTEIN
NUMBER OF SEQUENCES: 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: STEWART, Michael I
REGISTRATION UNMBER: 24,9
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Sim & McBurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
   STREET: U.L.
STREET: U.L.
TOPONTO
                                                                                                                                     APPLICANT:
                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 30 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 6TH F1
CITY: Toronto
                                                                                                                                                                                                                                                                                                      19 NLDA 22
                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NY: Canada
M5G 1R7
                                                                                                                                                                                                             7, Application US/09135166 6083743
                                                                                                                                                                                                                                                                                                                                                                  4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ontario
Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              THOMAS, Wayne
YANG, Yan Ping
LOOSMORE, Sheena
SIA, Dwo Yuan Charles
KLEIN, Michel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6TH Floor,
                             6TH Floor,
                                                                                                                   YANG, Yan Ping
LOOSMORE, Sheena
SIA, Dwo Yuan Charles
                                                                                                                                                                 THOMAS, Wayne
                                                                                                                                                                                                                                                                                                                                                                100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHONG,
                                                                                                                                                                                  CHONG, Pele
                                                                                                                                                                                                                                                                                                                                                                                                                                           SS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sim & McBurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (416)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , Pele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HAEMOPHILUS OUTER MEMBRANE PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      330 University Avenue
                               330 University Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/433,522A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24,973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17:
                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1038-434 MIS:jb
                                                                                                                                                                                                                                                                                                                                                                            Score 20; DB Pred. No. 76;
                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                              DB 3; Length 30;
                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                Gaps
```

COUNTRY:

M5G 1R7

Canada

```
US-08-660-531-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 17, Applicat Patent No. 6221645
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.0%; Score 20; Best Local Similarity 100.0%; Pred. No. Matches 4; Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (416) 595-1163
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: STEWART, Michael I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 1038
TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                        FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/480,498
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
NAME: Heslin, James M.
                                                                                                                                                                           ZIP: 94111-3834

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/433,522
FILING DATE: 12-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                ITLE OF INVENTION:
NAME: Heslin, James M. REGISTRATION NUMBER: 29, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                STREET: Two Embarcac
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19 NLDA 22
                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                        STATE:
                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/09/135,166 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NLDA 4
                                                                                                                                                                                                                                                                                                                                  California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08660531
                                                                                                                                                                                                                                                                                                                                                                 E: Townsend and Townsend and Crew LLP
Two Embarcadero Ctr., 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                         Anderson, Join Anderson Beta-Secretase
                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sinha, Sukant
Keim, Pamela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chrysler, Susanna M.S.
                                                                                                                                                                  US/08/660,531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17:
15270-002210US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1038-829 MIS:jb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
RESULT 21
US-08-942-046-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
~~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; TOPOLOGY: linear; MOLECULE TYPE: peptide US-08-660-531-17
 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 17,
                                                                                                                                                                                                                    TELEFAX: (416) 595-110
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                         REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION: NAME: STEWART, Michael I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: HAEMOPHILUS OUTER MEMBRANE PROTEIN NUMBER OF SEQUENCES: 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: LOOSMORE, Sheena
APPLICANT: SIA, Dwo Yuan Charles
APPLICANT: KLEIN, Michel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION:
                                                                  STRANDEDNESS:
                                                      TOPOLOGY:
                                                                                TYPE:
                                                                                           LENGTH:
                                                                                                                                              TELEPHONE:
                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25 NLDA 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                 M5G 1R7
                                                                             amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                         Toronto
                                                                                                                                                                                               STEWART, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                           Ontario
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/08942046
                                                                                                                                                                                                                                                                                                                                                                                                                                                   6TH Floor,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YANG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THOMAS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                            Sim & McBurney |
H Floor, 330 University Avenue
                                                                                                                                              (416) 595-1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    415-326-2400
                                                               single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                  595-1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yan Ping
 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wayne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                     08/433,522
                                                                                                                                                                                                                                                                                                        US/08/942,046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17:
                                                                                                                                                                       1038-732 MIS:jb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
Score 20; DB
Pred. No. 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
            DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 4; Length 30;
           Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
```

4;

Conservative

0;

Mismatches

0;

Indels

0,

Gaps

Q

NLDA

```
RESULT 23
US-08-443-883A-18
; Sequence 18, Application US/08443883A
                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 22
US-08-438-753B-18
                                                                                                                                                                                                 US-08-438-753B-18
                                                                                                                                      Matches
                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 18, Application US/08438753B Patent No. 5705363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION: APPLICANT: Imakaw
                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS LENGTH: 33 amino acid
                                                                                                                                                                                                                                           MOLECULE TYPE:
HYPOTHETICAL: N
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 56
TELECOMMUNICATION INFORMATION: 415-324-0880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 07/847,741
FILING DATE: 09-MAR-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/318,050
FILING DATE: 02-MAR-1989
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 30-OCT-1992
ATTORNEY/AGENT INFORMATION:
NAME: Sholtz, Charles K.
REGISTRATION NUMBER: 38,6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: ITTITLE OF INVENTION: ME
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 19-OCT-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 350 Came
CITY: Palo Alto
                                                                                                                                      Local Similarity
nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/438,753B FILING DATE: 10-MAY-1995
                                                                                               1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 08/139,891 FILING DATE: 19-OCT-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                              INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                              NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94306
                                                                                                                                                                                                                                                                                                    amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2: Dehlinger & Associates
350 Cambridge Ave., Suite
                                                                                                                                                                                                                                                                                                                    33 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                              415-324-0960
                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E: Floppy disk
IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Imakawa,
                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                        NO NO
                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Interferon
Methods of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kazuhito
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 07/969,890
                                                                                                                                                                                                              Amino acid sequence of fragment 90-122 of SEQ ID NO:4
                                                                                                                                                                                                                                                                                                                                                                                                                      38,615
                                                                                                                                                                                                                                                                                                                                                                                                         5600-0001.30
                                                                                                                                      0;
                                                                                                                                                      Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tau Compositions and Use
                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          250
                                                                                                                                                                  DB 1;
                                                                                                                                      0;
                                                                                                                                                                Length 33;
                                                                                                                                      Indels
                                                                                                                                      0,:
                                                                                                                                     Gaps
                                                                                                                                      0,
```

```
RESULT 24
US-08-631-328-18
                                                       Ъ
                                                                                Q
                                                                                                                                                                       US-08-443-883A-18
                                                                                                               Matches
                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No. 5738845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                TELEFAX: 415-324-0960 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                     TOPOLOGY: 11Hear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/139,891
FILING DATE: 19-OCT-1993
                                                                                                                                                                                                               HYPOTHETICAL: NO ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION UNBER: US 07/969,890
FILLING DATE: 30-0CT-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-324-0880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 09-MAR-1992 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 19-OCT-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/443,883A FILING DATE:
                                                                                                                                                                                                                                                                   TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                      INDIVIDUAL
                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                        NAME: Fabian, Gary REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                  1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                       6
                                                       NLDA
                                                                                                              4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: Dehlinger & Associates 350 Cambridge Ave., Suite
                                                                                                                                                                                                                                                                                    33 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                           100.0%; (ilarity 100.0%; ) (Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Johnson, Howard M
Pontzer, Carol H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Van Heeke,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bazer, Fuller W
                                                                                                                                                                                    ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Imakawa, Kazuhito
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER: US 07/318,050
02-MAR-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                    Gary R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Interferon Tau Compositions
Methods of Use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US 07/847,741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gino
                                                                                                                                                                                   Amino acid sequence of fragment 90-122 of SEQ ID NO:4
                                                                                                                                                                                                                                                                                                                                                                                      33,875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                            Score 20; DB Pred. No. 84; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                          5600-0001.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                250
                                                                                                                                         1;
                                                                                                              0
                                                                                                                                       Length 33;
                                                                                                              Indels
                                                                                                              0
                                                                                                              Gaps
```

Sequence 18, Application US/08631328 Patent No. 5939286
GENERAL INFORMATION:
APPLICANT: Johnson, Howard M.

```
RESULT 25
US-08-455-524B-18
                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-631-328-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOSTWARE: Patentin Release #1.0, Version #1.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/631,328
FILING DATE: 12-APR-1996
CLASSIFICATION: 435
PRIOR APPLICATION: 435
                                                                                                                                                                                                                                                                               Sequence 18, Application US/08455524B Patent No. 5942223
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 415-324-0960 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 33 amino acids
                                                                                                                                              APPLICANT: PONTZET, CATO1 F
APPLICANT: Ott, Troy L.
APPLICANT: Van Heeke, Gino
TITLE OF INVENTION: Interfe
TITLE OF INVENTION: Methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGINAL SOURCE:
INDIVIDUAL ISOLATE:
INDIVIDUAL ISOLATE:
COMPUTER READABLE FORM:
                                                                                                         CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                            APPLICANT: Bazer, Fuller W. APPLICANT: Johnson, Howard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: 415-324-0880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
FILING DATE: 10-MAY-1995
ATTORNEY/AGENT INFORMATION:
NAME: Sholtz, Charles K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Dehlinger & Associates
STREET: 350 Cambridge Ave., Suite 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Pontzer, Carol H.
APPLICANT: Subramaniam, Prem
TITLE OF INVENTION: Hybrid II
TITLE OF INVENTION: Methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                  CITY: Palo Alto
STATE: CA
                                                                               STREET:
                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 38, REFERENCE/DOCKET NUMBER:
                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                              6 NLDA 9
                                                                                                                                                                                                                                                                                                                                                                                                           1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                           4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
GY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sholtz, Charles K
                                               CA
                                                                          350 Cambridge Ave., Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      33 amino acids
                                 USA
                                                                                                                                                                                                           Johnson, Howard M.
Pontzer, Carol H.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Subramaniam, Prem S.
                                                                                           Dehlinger & Associates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NO peptide
                                                                                                                                              Interferon
Methods of
                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Methods of Use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hybrid Interferon Compositions and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Amino acid sequence of fragment 90-122 of SEQ ID NO:4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US 08/438,753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38,615
                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5600-0001.34
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 20;
Pred. No.
                                                                                                                                              Tau Compositions and Use
                                                                              250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2; Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

```
밁
                                                                                                                                                                                                                                                                                                                       US-08-659-984A-16
                                                                                                                                                                                                                                                                                                                                                                                                                     Ωy
                                                                                                                                                                                                                                                                                                                                         RESULT 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; INDIVIDUAL ISOLATE: ; INDIVIDUAL ISOLATE: US-08-455-524B-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Loc
Matches
                                                                                                                                                                                                                                                                                         Sequence 16, Patent No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 415-324-0900
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
                            COUNTRY: USA
ZIP: 94111-3834
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                           NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                            TITLE OF INVENTION:
                                                                                                                                                                                                                         APPLICANT: Sinha, Sukanto
APPLICANT: Jacobson-Croak, Kirsten
                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: 11 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: 415-324-0880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 07/969, FILING DATE: 30-OCT-1992 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
FILING DATE: 19-OCT-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPOTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                               STREET: Two Embarca
CITY: San Francisco
                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Sholtz, Charles K. REGISTRATION NUMBER: 38,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 07 FILING DATE: 02-MAR-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 08 FILING DATE: 10-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08 FILING DATE: 31-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                        6 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                     1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE:
                                                                                                                                                                                                                                                                                           5, Application US/08659984A 5942400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amino acid
                                                                                                California
                                                                                                                             Two Embarcadero Ctr., 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33 amino acids
                                                                                                                                                                                                                                                           Anderson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score larity 100.0%; Pred Conservative 0; Misn
IBM PC compatible SYSTEM: PC-DOS/MS-DOS
                                                                                                                                            Townsend and Townsend and Crew LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NO NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UMBER: US 07/847,741
09-mar-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Floppy disk
                                                                                                                                                                                    Assays for Detecting Beta-Secretase
Inhibition |
                                                                                                                                                                                                                                                        John P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US 08/438,753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Amino acid sequence of fragment 90-122 of SEQ ID NO:4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          us 07/318,050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US 08/139,891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38,615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/455,524B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5600-0001.32
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2; Length 33;
84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

```
RESULT 27
US-08-455-021B-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-659-984A-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 18, Applicat GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.
                                                                  APPLICATION NUMBER: US/08/455,021B
FILING DATE: 31-MAY-1995
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/139,891
FILING DATE: 19-0CT-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/847,741
FILING DATE: 09-MAR-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                              STREET: 350 CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                             SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: Interferon Tau Compositions and TITLE OF INVENTION: Methods of Use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear MOLECULE TYPE: pept
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 08/485,152 FILING DATE: 07-JUN-1995 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Rel CURRENT APPLICATION DATA:
                                                       FILING DATE: 09-MAR-
                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                               ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16 NLDA 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 33 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Heslin, James M. REGISTRATION NUMBER: 29 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NLDA 4
                                                                                                                                                                                                                                                                                                              94306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/08455021B
                                                                                                                                                                                                                                                                                                                                                                     E: Dehlinger & Associates
350 Cambridge Ave., Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   415-326-2422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Imakawa, Kazuhito
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Johnson, Howard M.
Pontzer, Carol H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bazer, Fuller W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Van Heeke, Gino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptide
                     UMBER: US 07/318,050
02-MAR-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
US 07/969,890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/659,984A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29,541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15270-002810US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                          250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-045-467-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-455-021B-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 18, Application US/09045467
GENERAL INFORMATION:
APPLICANT: Johnson, Howard M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 415-324-0960
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
HYPOTHETICAL: N
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION: TELEPHONE: 415-324-0880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Sholtz, Charles K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Sholtz, Charles K. REGISTRATION NUMBER: 38, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INDIVIDUAL ISOLATE: INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NLDA 4
ATTORNEY/AGENT INFORMATION:
NAME: Deblinger, Peter J.
REGISTRATION NUMBER: 28,006
REFERENCE/DOCKET NUMBER: 5600-0001.36
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/045,467
FILING DATE: 20-Mar-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: Dehlinger & Associates
STREET: 350 Cambridge Ave., Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Interferon Tau Compositions and Methods of Use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          amino acid
GY: linear
                                                                                             APPLICATION NUMBER: US 07/318,050 FILING DATE: 02-MAR-1989 APPLICATION NUMBER: US 07/969,890 FILING DATE: 30-OCT-1992
                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 08/455,021 FILING DATE: 31-MAY-1995
                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Palo Alto
                                                                                                                                                                     APPLICATION NUMBER: US 08/139,891
FILING DATE: 19-0CT-1993
APPLICATION NUMBER: US 07/847,741
FILING DATE: 09-MAR-1992
                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 08/438,753 FILING DATE: 10-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 94306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ی
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-OCT-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 20; DB 100.0%; Pred. No. 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amino acid sequence of fragment 90-122 of SEQ ID NO:4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carol H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38,615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5600-0001.31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2; Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

```
INDIVIDUAL ISOLATE: Amino acid sequence of fragment;
SEQUENCE DESCRIPTION: SEQ ID NO: 18:
US-09-045-467-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-660-531-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 29
             Query Match
Best Local Similarity
     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No. 6221645
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 16,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                    TELEFAX: 415-326-2422
                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: 18:
                                                                      TOPOLOGY: li
                                                                                                                                                                                NAME: Heslin, James M. REGISTRATION NUMBER: 29,541 REFERENCE/DOCKET NUMBER: 15: TELECOMMUNICATION INFORMATION: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: Two Embarcac
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6 NLDA 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HYPOTHETICAL: NO ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 33 amino aci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 650-324-0960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/08660531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Townsend and Townsend and Crew LLP
Two Embarcadero Ctr., 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Anderson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sinha, Sukanto
Keim, Pamela S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chrysler, Susanna M.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                        linear
                                                                      peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
                                                                                                  single
                                                                                                                                                                                                                                                                                                                     435
              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Beta-Secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 20; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             John P
                                                                                                                                                                                                                                                                                      US 08/480,498
                                                                                                                                                                                                                                                                                                                                             US/08/660,531
                                                                                                                                                            16:
    0;
                                                                                                                                                                                                                 15270-002210US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
             Score 20; DB
Pred. No. 84;
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4; Length 33
                            4; Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

```
RESULT 31
US-08-660-531-15
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                           US-08-659-984A-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-659-984A-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                      Sequence 15, Application US/08660531
Patent No. 6221645
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No. 5942400 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 15,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 15:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO: 15:
                                                                    APPLICANT: Chrysler, Susan
APPLICANT: Sinha, Sukanto
APPLICANT: Keim, Pamela S.
APPLICANT: Anderson, John
                                                 APPLICANT: Anderson, John P. TITLE OF INVENTION: Beta-Secretase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Anderson, John . APPLICANT: Sinha, Sukanto
APPLICANT: Jacobson Croak, Kirsten L.
APPLICANT: Jacobson Croak, Kirsten L.
                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: 1: MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 42 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 06
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC COMPATION OPERATING SYSTEM: PC-DO SOFTWARE: PatentIn Relaction DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
 ADDRESSEE:
                                                                                                                                                                                                                                                                 25 NLDA 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/659,984A
FILING DATE: 07-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Heslin, James M. REGISTRATION NUMBER: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: Two Embarca
CITY: San Francisco
                                                                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1: 42 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08659984A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: Townsend and Townsend and Crew LLP Two Embarcadero Ctr., 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                   100.0%; Score 20; DB 2; ilarity 100.0%; Pred. No. 1.1e+02; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: Floppy disk
IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
Townsend and Townsend and Crew LLP
                                                                                                                                                                                                                                                                                                                                                                                                                           peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                            single
                                                                                                                         Susanna M.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US 08/485,152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29,541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15270-002810US
                                                                                                                                                                                                                                                                                                                                                                    Length 42;
                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                     0,
```

San Francisco California

Two Embarcadero Ctr., 8th Floor

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; MOLECULE TYPE: US-08-660-531-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-905-223-345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 345, Application US/08905223 Patent No. 6222029
                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent No. 6222029
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 415-326-2422
NFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Heslin, James M.
REGISTRATION NUMBER: 29,541
REFERENCE/DOCKET NUMBER: 15:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
                                                                                                                                   OPERATING SYSTEM: Win95
SOFTWARE: Word
CURRENT APPLICATION DATA:
                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Lacroix, Bruno
TITLE OF INVENTION: 5' ESTS FOR SECRETED PROTEINS
NUMBER OF SEQUENCES: 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/480,498
FILING DATE: 07-JUN-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Relicontent Application Data:
APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Knobbe, M
                                                  NAME: Israelsen, Ned A.
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 42 amino acids TYPE: amino acid STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                        CITY: San Diego
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25 NLDA 28
                                                                                 FILING DATE:
CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity les 4; Conserv
                            NAME: Israelsen, Ned A. REGISTRATION NUMBER: 29
                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                              STREET:
                REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94111-3834
                                                                                                                                                                                                                                          92101-3505
                                                                                                                                                                                                                                                                                                         501 West Broadway
                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                               Duelert, Aymeric
                                                                                                                                                                                                                                                                                                                                                                                                                              Edwards, Jean-Baptiste D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                             Martens, Olson & Bear
                                                                                                                   US/08/905,223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/660,531
                              29,655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15270-002210us
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 20; DB 4; Pred. No. 1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

```
RESULT 33
US-08-924-330A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                         US-08-924-330A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               us-08-905-223-345
Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No. 6022948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 10, Application US/08924330A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (619) 235-01
INFORMATION FOR SEQ ID NO:
                                                                                                                                               INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: LINE MOLECULE TYPE: PORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 44 amino acids
TYPE: AMINO ACID
TYPE: AMINO ACID
                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Meyer, Scott J.
REGISTRATION NUMBER: 25,
                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-SOFTWARE: Word Perfect 5.0 CURRENT APPLICATION DATA:
                                                                                                                                                                         REFERENCE/DOCKET NUMBER: WU
TELECOMMUNICATION INFORMATION:
                                                                      TOPOLOGY: 1: MOLECULE TYPE:
                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: Met
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDREET: U.
STREET: U.
ST. St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity nes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IDENTIFICATION METHOD: Von Heijne matri: OTHER INFORMATION: score 4.8
OTHER INFORMATION: seq LEAISSLSSFVLG/RM
                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/026,226 FILING DATE: 17-SEPT-1996
                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE:
COMPUTER: IE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30 NLDA 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo Sap
TISSUE TYPE: Brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 63167
                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                              TELEPHONE:
                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: sig_peptide
                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NLDA 4
                                                                                                 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      800 No.
100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goldberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LINEAR
E: PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Louis
                                                                                      linear
                                                                                                                                                            314-694-3117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scott J. Meyer
0 No. 6022948th Lindbergh Blvd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (619) 235-8550
                                                                                                                                                                                                                                                                                                                                                                                              Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9) 200
) 235-0176
-- NO: 345:
                                                                                                                                                                                                                                                                                                                                                                   PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gregory I.
Method of Cell Surface Activation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D: Von Heijne matrix score 4.8
                                                                                                                                                                                                                                                                                                                         US/08/924,330A
                                                                                                                                                                                                      25,275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inhibition
 0
                                                                                                                                                                                         WU-2982
Score 20; DB 3;
Pred. No. 1.2e+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 44;
                         Length 46;
Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
 0;
```

NLDA

```
RESULT 35
US-08-370-225-29
                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                           US-09-138-721-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              us-09-138-721-10
                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.
4; Conservative
                                                                                                                                  Sequence 29, Application US/08370225
Patent No. 5580736
GENERAL INFORMATION:
APPLICANT: Brent, Roger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent No. 6274703
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                APPLICANT: Brent, Koyel
APPLICANT: Gyuris, Jeno
APPLICANT: Gyuris, Erica
TITLE OF INVENTION: Interaction Trap System
TITLE OF INVENTION: No. 5580736el Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: WU
TELECOMMUNICATION INFORMATION:
TELEPHONE: 314-694-3117
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson
                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 530 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Word Perfect 5.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Goldberg,
TITLE OF INVENTION: A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 08/94
FILING DATE: 5-SEPT-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Meyer, Scott J. REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE:
                                                                                                                                                                                                                                                                                                                                                                                              TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                       1 NLDA 4
                                                                                                                                                                                                                                               2 NLDA 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a 10, ar
no. 6274703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63167
            Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/09138721
                          225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Louis
                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scott J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                   peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    t J. Meyer
6274703th Lindbergh Blvd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and Inhibition
: 19
                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Method of Cell Surface Activation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08/942,330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/09/138,721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25,275
                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WU-2982/2
                                                                                                                                                                                                                                                                                                 Score 20; DB
Pred. No. 1.2
0; Mismatches
                                                                                                                                                                                                                                                                                                                               DB 4;
                                                                                                                                                                                                                                                                                                                .2e+02;
                                                                                            for Isolating
                                                                                                                                                                                                                                                                                                                            Length 46
                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                 0,
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-370-225-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-370-225-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No. 5580736
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 30,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 07/969,038
FILING DATE: 10/30/92
ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T
REGISTRATION NUMBER: 30,162
REFERENCE/DOCKET NUMBER: 00786/143001
TELECOMMUNICATION INFORMATION:
TELECAX: (617) 542-8906
TELECAX: (617) 542-8906
             PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/969,03:
FILING DATE: 10/30/92
ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEX: 200154 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                         COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM PS/2 Model 50z or 55sx
OPERATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Brent, Roger
APPLICANT: Gyuris, Jeno
APPLICANT: Golemis, Erica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IEM PS/2 Model 502 or 55SX
OPERATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                          CLASSIFICATION:
                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                     STATE: Massachusetts
COUNTRY: U.S.A.
ZIP: 02110-2804
                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15 NLDA 18
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02110-2804
                                                                                                                                                                                                                                                                                                                                           Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ), Application US/08370225 5580736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
                                                                                                                                                                                                                                                                                                                                                           225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                              Fish & Richardson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                              No. 5580736el Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                               Interaction Trap System for Isolating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 20;
100.0%; Pred. No.
                                                                                       07/969,038
                                                                                                                                                            US/08/370,225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/370,225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29:
00786/143001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20; | DE _____
| NO. 1.5e+02;
| 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: US-08-370-225-30
                                                                      US-08-461-859-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-461-859-29
Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 4; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent No. 5786169
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 29,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 542-5070
TELEPAX: (617) 542-8906
TELEX: 200154
INFORMATION FOR SEQ ID NO: 30:
                                                                                                                                                                                                        NAME: Lech, Karen F.

REGISTRATION NUMBER: 35,238
REFERENCE/DOCKET NUMBER: 0078
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 542-5070
TELEPAX: (617) 542-8906
                                                                                                                                                                           TELEX: 200154
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM PS/2 Model 50Z or 55SX
OPERATING SYSTEM: MS-DOS (Version 5.0
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 57
                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/969,031
FILING DATE: OCCODER: 30, 1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/370,225
FILING DATE: January 9, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: Interaction Trap System for Isolating TITLE OF INVENTION: No. 5786169el Proteins NUMBER OF SEQUENCES: 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Brent, Roger
                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/461,859 FILING DATE: June 5, 1995 CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: U.S.A. ZIP: 02110-2804
                                                                                                                          TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15 NLDA 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 100 ues 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acid
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET:
                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                         amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/08461859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gyuris, Jeno
Golemis, Erica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                   07/969,038
                                                                                                                                                                                                                                                                  00786/143002
   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
Score 20; DB 1; 1
Pred. No. 1.5e+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 20; DB 1;
Pred. No. 1.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.0)
                                Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 57;
 Indels
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
 Gaps
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
```

```
Š
                                                                                                               RESULT 39
PCT-US93-10069-29
                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 38
US-08-461-859-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                              US-08-461-859-30
                                                             Sequence 29, Application PC/TUS9310069
GENERAL INFORMATION:
APPLICANT: Brent, Roger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 30, Apprix
No. 5786169
                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (617) 542-89
TELEX: 200154
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: U2110 2001
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM PS/2 Model 50Z or 55SX
COMPUTER: MS-DOS (Version 5.0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICAN:. Inte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Gyuris, Jeno
APPLICANT: Golemia TITTE COL
                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 00786/143002
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 542-8906
TELEPAX: (617) 542-8906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/370,225
FILING DATE: January 9, 1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PS/2 Model 50Z or 55S;
OPERATING SYSTEM: MS DOS (Version 5
SOFTWARE: WoddPerfect (Version 5.1)
CURRENT APPLICATION DATA:
APPLICANT: Gyuris, Jeno
APPLICANT: Golemis, Erica
TITLE OF INVENTION: Inter:
TITLE OF INVENTION: Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 07/969,038
FILING DATE: October 30, 1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Lech, Karen F.
REGISTRATION NUMBER: 35,238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08/461,859 FILING DATE: June 5, 1995 CLASSIFICATION: 530
                                                                                                                                                                                 15 NLDA 18
                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15 NLDA 18
                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                              1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                               4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boston
                                                                                                                                                                                                                                                                                                                                                            amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/08461859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Golemis, Erica
                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Interaction Trap System for Isolating No. 5786169el Proteins
Interaction Trap System for Isolating Novel Proteins
                                                                                                                                                                                                                                                                                                                                                                                                               30:
                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                              Score 20;
Pred. No.
                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                              1.5e+02;
                                                                                                                                                                                                                                                                                 DB 1;
                                                                                                                                                                                                                                                                              Length 57;
                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                               Gaps
```

NUMBER OF SEQUENCES: 3

ADDRESSEE:

E: Fish & Richardson 225 Franklin Street

Massachusetts

```
Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PCT-US93-10069-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT-US93-10069-29
                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 30, Application PC/TUS9310069 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (617) 542-89
TELEX: 200154
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                APPLICANT: Gyuris, Jéno
APPLICANT: Golemis, Erica
TITLE OF INVENTION: Interaction Trap System for Isolating
TITLE OF INVENTION: Novel Proteins
                  PRIOR APPLICATION DATA:
                                                                                    COMPUTER: IBM PS/2 Model 50Z or 55SX
OPERATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: 3.5" Diskette,
                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Clark Paul T.
REGISTACH NUMBER: 30,162
REFERENCE,DOCKET NUMBER: 007
TELECOMMUNICATION INFORMATION:
TELECHONE: (617) 542-5070
TELECHONE: (617)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM PS/2 Model 50Z or 55SX
OPERATING SYSTEM: MS-DDS (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
**PDT TOTATION WINDED: NOTWINGS 110060
                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/96
FILING DATE: 10/30/92
ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T.
                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                             APPLICATION NUMBER: PCT/1
FILING DATE: 20-OCT-1993
CLASSIFICATION:
                                                                                                                                                                                                                              CITY: Boston
STATE: Massar
   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15
                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                     STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: 1i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity es 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: PCT/
FILING DATE: 20-OCT-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NLDA 18
                                                                                                                                                                                                 02110-2804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02110-2804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              amino acid
                                                                                                                                                                                                                              Massachusetts
                                                                                                                                                                                                                                                                   225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (617) 542-8906
                                                                                                                                                                                                                                                                                                                                                                                                             Brent, Roger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                        ω
ω
07/969,038
                                                                     PCT/US93/10069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCT/US93/10069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07/969,038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   00786/143001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 20; DB 5;
Pred. No. 1.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
```

```
US-08-995-156A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 41
US-08-995-156A-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PCT-US93-10069-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 40,
Patent No. 6
      Matches
                    Best Local Similarity
                                  Query Match
                                                                                                                                      REFERENCE/DOCKET NUMBER: 140
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-2600
TELEFAX: 202-371-2540
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                            CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: 60/042,
APPLICATION NUMBER: 60/042,
FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: STEEFE, ERIC K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEX: 200154
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 20005-3934

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0/ Version #1.30
                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: RUBEN, STEVEN M.
APPLICANT: OLSEN, HENRIK S.
TITLE OF INVENTION: CHEMOKII
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION: TELEPHONE: (617) 542-5070 TELEFAX: (617) 542-8906
                                                                                           TYPE: ami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 10/30/92
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                     REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: Herewi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 1100 NEW CITY: WASHINGTON
                                                                                                                             LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15 NLDA 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
TOPOLOGY: li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                             amino acid
GY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/08995156A
                                                                                                                           62 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E: STERNE, KESSLER, GO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
   100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KREIDER,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                         Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHEMOKINE BETA-6 ANTAGONISTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BRENT L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KESSLER, GOLDSTEIN & FOX P.L.L.C.
DRK AVENUE, SÜITE 600
                                                                                                                                                                                                                                                                                              60/042,269
                                                                                                                                                                                                                                                                                                                                                         US/08/995,156A
                                                                                                                                                                                                                                  36,688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30:
      0
                                                                                                                                                                                                                  1488.0340004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
Score 20; DB 3; Pred. No. 1.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           00786/143001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20; DB 5;
Pred. No. 1.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                               Length 62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 57
    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

밁

59

NLDA 4 |||| NLDA 62

```
밁
                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 42
US-09-419-281-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-419-281-40
                                                                                                                                                                                                                     US-08-995-156A-41
                                                                                                                                                                                                                                              RESULT 43
                                                                                                                                                         Sequence 41, Application US/08995156A
Patent No. 6028169
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 40, Applicati
Patent No. 6379926
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 40: SEQUENCE CHARACTERISTICS: LENGTH: 62 amino acids
CORRESPONDENCE ADDRESS:
ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
STREET: 1100 NEW YORK AVENUE, SUITE 600
                                                 NUMBER OF SEQUENCES: 114
                                                                                  APPLICANT: KREIDER, BRENT L.
APPLICANT: RUBEN, STEVEN M.
APPLICANT: OLSEN, HENRIK S.
TITLE OF INVENTION: CHEMOKIN
                                                                                                                                                                                                                                                                                                     59 NLDA 62
                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                            1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 40:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: STEFFE, ERIC K
REGISTRATION NUMBER: 36,688
REFERENCE/DOCKET NUMBER: 1488.0340004
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 08/995,156 FILING DATE: <Unknown> ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: CHEMOKINE BETA-6 ANTAGONISTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: KREIDER, BRENT L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/09/419,281
FILING DATE: 15-Oct-1999
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 202-371-260
TELEFAX: 202-371-2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 20005-3934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 1100 NEW YORK AVENUE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: STERNE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/09419281
                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RUBEN, STEVEN M. OLSEN, HENRIK S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             202-371-2600
                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 20; DB 4; L
100.0%; Pred. No. 1.6e+02;
^ Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KESSLER, GOLDSTEIN & FOX P.L.L.C.
                                                                                                                                                                                                                                                                                                                                                                                                                    Length 62;
                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-995-156A-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-995-156A-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 86,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: 202-371-2600
TELEFAX: 202-371-2540
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 63 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                             APPLICATION NUMBER: US/08/
FILING DATE: Herewith
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/042
APPLICATION NUMBER: 1997
ATTORNEY/AGENT INFORMATION:
NAME: CTEPEE ESTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/995,156A
                                                                                                                                                                              SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 31-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: STEFFE, ERIC K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: RUBEN, STEVEN M.
APPLICANT: OLSEN, HENRIK S.
TITLE OF INVENTION: CHEMOKINE BETA-6 ANTAGONISTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: STERNE, K
                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0.
                                                                                                                                                                                                                                                                                                                                   STREET: LIUU NL...
CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: WASHINGTON STATE: DC
                                                                                                                                                                                                                                                                                                                               STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 36, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/0 FILING DATE: 31-MAR-1997
NAME: STEFFE, ERIC K
REGISTRATION NUMBER: 36,688
REFERENCE/DOCKET NUMBER: 1488.0340004
                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59 NLDA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20005-3934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6, Application US/08995156A 6028169
                                                                                                                                                                                                                                                                                           20005-3934
                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                             E: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KREIDER, BRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      202-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/042,269
                                                                                        60/042,269
                                                                                                                                                              US/08/995,156A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36,688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1488.0340004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 20; DB 3;
Pred. No. 1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

```
; TOPOLOGY: linear; ; MOLECULE TYPE: protein ; SEQUENCE DESCRIPTION: SEQ ID NO: 41: US-09-419-281-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 63 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-995-156A-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 45
US-09-419-281-41
                                   Ş
  밁
                                                                                               Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No. 6379926
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 41,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: 202-371-2600
TELEPAX: 202-371-2540
INFORMATION FOR SEQ ID NO: 86:
                                                                                                                                                                                                                                                                           NAME: STEFFE, ERIC K
REGISTRATION NUMBER: 36,688
REFERENCE/DOKET NUMBER: 1488.0340004
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-2500
TELEPHONE: 202-371-2540
INFORMATION FOR SEQ ID NO: 41:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Ver
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/99/419,281
FILING DATE: 15-Oct-1999
CLASSIFICATION: CUNKNOWN)
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION UMBER: 08/995,156
FILING DATE: <UNKNOWN)
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |||||
60 NLDA 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          / Match 100.0%; Score 20; DB 3; I
Local Similarity 100.0%; Pred. No. 1.7e+02;
les 4; Conservative 0; Mismatches 0;
59 NLDA 62
                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NLDA 4
                                       1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RUBEN, STEVEN M.

OLSEN, HENRIK S.

TITLE OF INVENTION: CHEMOKINE BETA-6 ANTAGONISTS
RUBBER OF SEQUENCES: 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
STREET: 1100 NEW YORK AVENUE, SUITE 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: KREIDER, BRENT L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: WASHINGTON STATE: DC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                              LENGTH: 63 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/09419281
                                                                           100.0%; Score 20; DB 4; Length 63; ilarity 100.0%; Pred. No. 1.7e+02; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                           Gaps
                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

Search completed: February 6, 2003, 11:24:10
Job time: 10.3333 secs

```
Title:
Perfect score:
                                                                                                                                                                                                                                                                                                            Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
::
                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                              Score
       Published_Applications_AA:*

1: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*

2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*

3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*

5: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*

6: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

7: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

9: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

10: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

11: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

12: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

13: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*

14: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*

14: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length: 0
length: 2000000000
      100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  February 6, 2003, 11:22:09; Search time 5.83333 Seconds (without alignments) 15.202 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       129505 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 nlda 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT943-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                             Length
       44440001111444444444444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22169297 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gapext 0.5
       0 US-09-794-927-66
0 US-09-794-743-66
0 US-09-794-748-66
0 US-09-794-748-66
0 US-09-896-874-8
0 US-09-896-874-8
0 US-09-896-874-8
0 US-09-795-903A-5
0 US-09-795-903A-5
0 US-09-794-927-63
0 US-09-794-927-63
0 US-09-794-743-63
0 US-09-794-748-63
0 US-09-794-925-63
0 US-09-794-925-63
0 US-09-794-925-63
0 US-09-794-925-63
0 US-09-794-925-63
0 US-09-881-442-63
                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            222
Sequence 66, Appl
Sequence 8, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 63, Appl
Sequence 5, Appli
Sequence 63, Appl

                                                                                                                                                                                                                                                                                           Description
```

Qy	Query Ma Best Loc Matches	RESULT 1 US-09-794-927 Sequence 66 Patent No. GENERAL INI APPLICANT APPLICANT APPLICANT APPLICANT APPLICANT APPLICANT APPLICANT APPLICANT CURRENT EFFE CURRENT F FILLE OF FILLE REFEE CURRENT F FILLE OF FILLE REFEE CURRENT F FILLE OF FILLE FILLE OF FILLE FILLE OF FI		4 4 4 4 4 4 4 4 5 5 6 5 6 6 6 6 6 6 6 6
NLDA 4	<pre>fatch cal Similarity 4; Conserva</pre>	27-66 65, Applica 66, Applica 67, Applica 67, Applica 68, Applica 69, Applica 61, Applica 62, Applica 63, Applica 64, Applica 64, Applica 65, Applica 66, Applica 66, Applica 66, Applica 66, Applica 66, Applica 67, Applica		20 100.0 20 100.0
	100. 100. tive			112 228 30 30 30 30 30 30 30 30 30 30 30 30 30
	. 0%;	E. E. Alchael Achert A. A. BEIMER'S BOFG 280FG 2916 109.4 109.4 109.2 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2		100 1100 1100 1100 1100 1100 1100 1100
	Score 20; DB 10; Pred. No. 1.1e+05; 0; Mismatches 0;	US/09794927 1 E. Michael J. Robert L. A. HEIMER'S DISEASE SECRETASE, REFOR 280FG 280FG 280FG 280FG 10-27 01-07-27 01-07-27 01-07-27 01-07-23 : 09/416,901 : 09/404,133	ALIGNMENTS	US-09-896-139-1 US-09-895-843-1 US-09-896-874-9 US-09-896-139-9 US-09-896-139-4 US-09-896-139-4 US-09-896-139-6 US-09-896-139-6 US-09-896-139-6 US-09-896-139-6 US-09-896-761-42457 US-09-864-761-42457 US-09-864-761-42457 US-09-864-761-38553 US-09-864-761-38553 US-09-864-761-38553 US-09-864-761-38553 US-09-864-761-3853 US-09-864-761-38553 US-09-864-761-38553 US-09-864-761-38553 US-09-864-761-38553 US-09-864-761-38553 US-09-864-761-38553 US-09-864-761-38553 US-09-864-761-38553 US-09-764-877-1103 US-09-764-877-1103 US-09-764-877-1103 US-09-764-877-1103 US-09-764-877-1103 US-09-764-877-1103 US-09-864-761-33423 US-09-970-921-4 US-09-970-921-4 US-09-970-921-4 US-09-970-921-4 US-09-970-921-4 US-09-970-921-4 US-09-970-921-4 US-09-970-931-4
	Length Indels	APP		
	th 4; els 0;	SUBSTRATES		Sequence
	Gaps	S THEREPOR.		1, Appl 1, Appl 9, Appl 9, Appl 14, Appl 14, Appl 14, Appl 16, Appl 16, Appl 17, Appl 17, Appl 17, Appl 17, Appl 18, Appl 19, Appl 10, Appl 11, Appl 11, Appl 11, Appl 12, Appl 13, Ap 1103, Ap
	0;	ੈ		

AND

DЬ

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-794-743-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/20881
                                                                                                                                                                                                                                                                                                                                                                               Sequence 66, Application US/09794743 Patent No. US20010021391A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: Description of Artificial Sequence: Peptide -09-795-847-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 66, Application UPatent No. US20010018208A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE:
SEQ ID NO 66
                                           PRIOR FILLING L.... 09/.
PRIOR APPLICATION NUMBER: 09/.
                                                                                 PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/794,743
CURRENT FILING DATE: 2001-02-27
                                                                                                                                                                                                               TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                FILE REFERENCE:
                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NLDA
         APPLICATION NUMBER: PCT APPLICATION NUMBER: PCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/
FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                        Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                       Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                           Gurney, Mark E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney, Mark E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                    Rigiang
                                                                                                                                                                                            28341/6280BC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Riqiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28341/6280DE
NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1999-09-23
                                                                                                                                                                                                                   THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           THEREFOR
                                                                                                                                                                                                                                    USES
                                                                                                                                                                                                                                                 ALZHEIMER'S DISEASE SECRETASE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/09795847
                                                                 09/404,133
                                PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 20; DB 10;
Pred. No. 1.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 4;
                                                                                                                                                                                                                                                 APP SUBSTRATES THEREFOR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

```
US-09-794-925-66
                                                                                                                                                       ₽
                                                                                                                                                                                                                                                                            US-09-794-748-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-794-748-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Description of Artificial Sequence: Peptide US-09-794-743-66
              Sequence 66, Application US/09794925
Patent No. US20020064819A1
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 4; Conser
                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Parodi, L
APPLICANT: Yan, Riqi.
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: I
                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: PCT PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILLNS LALL.
PRIOR APPLICATION NUMBER: 60/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 09/PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/794,748
CURRENT FILING DATE: 2001-02-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 09/PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1
NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Description of Artificial Sequence: Peptide
                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                      CENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 100 nes 4; Conservative
                                                                                                                                                       ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NLDA 4
                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/
FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66, Application o
o. US20020037315Al
                                                                                                                                                                                                                                                                                                                                                                                   PatentIn Ver. 2.0
Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gurney, Mark E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/09794748
                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28341/6280JL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rigiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALZHEIMER'S DISEASE SECRETASE,
                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09/404,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09/416,901
                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/155,493
                                                                                                                                                                                                                             Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 20; DB 10;
Pred, No. 1.1e+05;
                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                              1.1e+05;
                                                                                                                                                                                                                                           DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 4;
                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APP SUBSTRATES THEREFOR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

Parodi, Luis A.

0

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Peptide
US-09-794-925-66
                                                                                                                             ; OTHER INFORMATION: Description US-09-681-442-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE:
SEQ ID NO 66
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence bb,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/681,442
CURRENT FILING DATE: 2001-04-05
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/794,925
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: ALLHEIMER'S DISEASE SECRETASE, TITLE OF INVENTION: THEREFOR FILE REFERENCE: 28341/6280FG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-
NUMBER OF SEQ ID NOS: 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 09/404,133
PRIOR TILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILLING LEAD.

PRIOR APPLICATION NUMBER: 09/
PRIOR APPLICATION 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR ETITING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Parodi, Luis A. APPLICANT: Yan, Rigiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Bienkowski, Michael J.
APPLICANT: Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Gurney, Mark E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 100 les 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/1
APPLICATION NUMBER: 60/1
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the sta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09681442
S20020081634A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28341/6280HI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 20; DB 10; 100.0%; Pred. No. 1.1e+05;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09/404,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/155,493
                                                                                                                                                                of Artificial Sequence: Peptide
Score 20; DB 10;
Pred. No. 1.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APP SUBSTRATES THEREFOR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND
```

```
APPLICANT: Pulley, Shon R.

APPLICANT: TenBrink, Ruth E.

ITITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE

FILE REFERENCE: 13615.25USU4

CURRENT APPLICATION NUMBER: US/09/896,139

CURRENT FILING DATE: 2001-06-29

PRIOR APPLICATION NUMBER: US 60/215,323

PRIOR APPLICATION NUMBER: US 60/215,323

PRIOR FILING DATE: 2000-06-30

PRIOR FILING DATE: 2000-10-30

PRIOR FILING DATE: 2000-12-15

PRIOR APPLICATION NUMBER: US 60/252,736

PRIOR APPLICATION NUMBER: US 60/259,956

PRIOR APPLICATION NUMBER: US 60/259,956

PRIOR APPLICATION NUMBER: US 60/268,497

PRIOR APPLICATION NUMBER: US 60/279,779

PRIOR FILING DATE: 2001-02-13

PRIOR FILING DATE: 2001-03-29

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; FEATURE:
; OTHER INFORMATION: Synthetic
US-09-896-874-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 7
US-09-896-874-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-896-139-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 8, Application US/09896139 Patent No. US20020128255A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Fang, Lawrence Y.
APPLICANT: John, Varghese
TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE
FILE REFERENCE: 13615.40USU1
CURRENT APPLICATION UNMERER: US/09/896,874
CURRENT FILING DATE: 2001-06-29
CURRENT FILING DATE: 2001-06-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 8, Application US/09896874 Patent No. US20020016320A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/215,323
PRIOR FILING DATE: 2000-06-30
NUMBER OF THE PRIOR FILING DATE: 2000-06-30
                     PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 2001-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE:
NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Beck, James P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jagodizinska, Barbara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gailunas, Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Freskos, John
                                                                                                                                                                                                                                                                                                                                                                                                                                      John, Varghese
Maillaird, Michel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fang, Lawrence Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
ilarity 100.0%;
Conservative (
                       2001-06-04
                                             us 60/295,589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 20; DB 10;
Pred. No. 1.1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

```
RESULT 10
US-09-795-903A-5
                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Synthetic US-09-895-843-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION: Synthetic US-09-896-139-8
                                                                                                            Sequence 5, Application US/09795903A
Patent No. US20020164760A1
GENERAL INFORMATION:
APPLICANT: Tang, Jordan J.N.
APPLICANT: Lin, Xinli
APPLICANT: Koelsch, Gerald
TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
TITLE OF INVENTION: of Use Thereof
FILE REFERENCE: OMRF 179
                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 8, Application US/09895843 Patent No. US20020143177A1
                              CURRENT APPLICATION NUMBER: US/09/795,903A CURRENT FILING DATE: 2001-02-28 PRIOR APPLICATION NUMBER: 09/604,608 PRIOR FILING DATE: 2000-06-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 100.0%;
Best Local Similarity 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/895,843
CURRENT FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/215,323
PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 2000-06-30
NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Pulley, Shon R.
APPLICANT: TenBrink, Ruth E.
TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE
FILE REFERENCE: 13615.41USU1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Beck, James P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 9
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artificial Sequence
APPLICATION NUMBER: 60/168,060 FILING DATE: 1999-11-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    John, Varghese
Maillaird, Michel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jagodizinska, Barbara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gailunas, Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Freskos, John N.
                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 20; DB 10; ilarity 100.0%; Pred. No. 1.1e+05; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .1e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
RESULT 12
US-09-795-847-63
                                                                   밁
                                                                                               Qy
                                                                                                                                                                                                  ; OTHER INFORMATION: Description US-09-794-927-63
                                                                                                                                                                                                                                                                                ; PRIOR FILING DATE: 199; NUMBER OF SEQ ID NOS: SOFTWARE: PATENTIN VEI; SEQ ID NO 63; LENGTH: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-795-903A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Bienkowski, Mi
APPLICANT: Heinrikson, Ro
APPLICANT: Parodi, Luis A
APPLICANT: Yan, Rigiang
TITLE OF INVENTION: ALCHE
TITLE OF INVENTION: THERE
TITLE OF INVENTION: THERE
                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 63,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: U2/09/794,927
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 09/4
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/210,292
PRIOR FILING DATE: 2000-06-08
NUMBER OF SEQ ID NOS: 31
SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/177,836
PRIOR FILING DATE: 2000-01-25
PRIOR APPLICATION NUMBER: 60/178,368
PRIOR FILING DATE: 2000-01-27
PRIOR FILING DATE: 2000-01-27
                                                                                                                                                                                                                                                ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: .10
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                 4
                                                                                    1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US20010016324A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                  PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney, Mark E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/09794927
                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description of \operatorname{Artificial} Sequence: Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR,
                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                 60/101,594
                                                                                                                                                                                                                                                                                                                                                                                              PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                              09/404,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/155,493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                               Score 20;
Pred! No.
                                                                                                                                                                                                          of Artificial Sequence: synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
Pred.
                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.
                                                                                                                                                               10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 10
                                                                                                                                                           Length 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
CURRENT APPLICATION NUMBER: US/09/794,743;
CURRENT FILING DATE: 2001-02-27;
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13;
PRIOR FILING DATE: 1999-00-73;
PRIOR FILING DATE: 1999-00-73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: Description of Artificial Sequence: synthetic US-09-795-847-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-794-743-63
                                                           PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/40
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101
PRIOR FILING DATE: 1998-09-24
NITMBER FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100.
Matches 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 63, Application US/09794743 Patent No. US20010021391A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 63
LENGTH: 10
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT EILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 09/10-13
                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1999-0
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1999-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: USES
TITLE OF INVENTION: THEREFOR
                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: ALZHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZI
                                                  NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 UMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 NLDA 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NLDA 4
NO 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3, Application US/09795847
US20010018208A1
                                   PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                        Yan, Rigiang
                                                                                                                                                                                                                                                                                                                                                                                            Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney, Mark E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gurney, Mark E.
                                                                                                                                                                                                                                                                                                                                                                           Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Parodi,
                                                                                                UMBER: PCT/US99/20881
1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Luis A.
                                                                                                                                                                                                                                                                                                                                          ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 20; DI
100.0%; Pred. No. 12
tive 0; Mismatches
                                                                                       60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09/404,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/155,493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10; Length 10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

```
Query Match
Best Local Similarity
Watches 4; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: Description of Artificial Sequence: synthetic US-09-794-743-63
                                                                                                                                                                                                   RESULT 15
US-09-796-264-5
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                           ; FEATURE:
; OTHER INFORMATION: Description
US-09-794-748-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
US-09-794-748-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 63
LENGTH: 10
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                 Sequence 5, Application US/09796264
Patent No. US20020049303A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 63, Application US/09794748 Patent No. US20020037315A1
                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                               APPLICANT: Tang, Jordan J.N.
APPLICANT: Lin, xinli
APPLICANT: Koelsch, Gerald
TITLE OF INVENTION: Catalytically Active Recombinant Memapsin and Methods
TITLE OF INVENTION: of Use Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLIANTE: 1995 PRIOR FILING DATE: 1995 PRIOR APPLICATION NUMBER: PCT/PRIOR APPLICATION NATE: 1996-09-23
TITLE OF INVENTION. 179
FILE REFERENCE: OMRE 179
CURRENT APPLICATION NUMBER: US/09/796,264
CURRENT APPLICATION NUMBER: 2001-02-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: 28341/6280JL
CURRENT APPLICATION NUMBER: US/09/794,748
CURRENT FILING DATE: 2001-02/416,901
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Yan, Rigiang TITLE OF INVENTION: ALZITITLE OF INVENTION: USE: TITLE OF INVENTION: THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                       4 NLDA
                                                                                                                                                                                                                                                                                                         1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NLDA 4
                                                                                                                                                                                                                                                                                                                                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gurney, Mark E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09/404,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/101,594
                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                        Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                        of Artificial Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                        10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10;
                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                      Length 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                         synthetic
                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

```
밁
                                 Ş
                                                                                                                                                                    ; OTHER INFORMATION: Description of Artificial Sequence: synthetic US-09-794-925-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 16
US-09-794-925-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Peptide
US-09-796-264-5
                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: 28341/6280HI
CURRENT APPLICATION NUMBER: US/09/794,925
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR PELICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
                                                                                                                                                                                                                                                     SOFTWARE: POSEQ ID NO 63
LENGTH: 10
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S-09-/3
Sequence 63, App.
Sequence 63, App.
US2002
                                                                                                     Best
                                                                                Matches
                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/1
PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: ALŽHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USE: TITLE OF INVENTION: THEREFOR FILE REFERENCE: 28341/6280HI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 2000-06-08 NUMBER OF SEQ ID NOS: 31
                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                            ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID NO 5
                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OR FILING DATE: 1999-11-30

RAPPLICATION NUMBER: 60/177,836

OR FILING DATE: 2000-01-25

OR APPLICATION NUMBER: 60/178,368

OR FILING DATE: 2000-01-27

OR APPLICATION NUMBER: 60/210,292

OR FILING DATE: 2000-06-08
                      1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 NLDA 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/168,060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 09/604,608 FILING DATE: 2000-06-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
                                                                                                                                                                                                                                                                                                                      PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gurney, Mark E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Parodi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bienkowski, Michael J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/09794925
                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20064819A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rigiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000-06-27
                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                60/101,594
                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                              Score 20; DB
Pred. No. 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 20; DB
Pred. No. 12;
                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 10; Length 10;
                                                                                                                  Length 10;
                                                                       Indels
                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
```

```
Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-845-226-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: Description of Artificial Sequence: synthetic US-09-681-442-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-681-442-63
                                            SEQ ID NO 5
LENGTH: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100
Best Local Similarity 100
Matches 4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 5, Application US/09845226 Patent No. US20020115600A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 63, Application U: Patent No. US20020081634A1
                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Tang, Jordan J.N.
APPLICANT: Hong, Lin
APPLICANT: Ghosh, Arun K.
TITLE OF INVENTION: Inhibitors of Memapsin 2 and Use Thereof
FILE REFERENCE: OMRF 182
CURRENT APPLICATION NUMBER: US/09/845, 226
                                                                                                          PRIOR FILING DATE: 2000-06-08
NUMBER OF SEQ ID NOS: 31
                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/168,060 PRIOR FILING DATE: 1999-11-30 PRIOR APPLICATION NUMBER: 60/177,836 PRIOR FILING DATE: 2000-01-25
                                                                                                                                                                                                                                                                                                           CURRENT FILING DATE: 2001-04-30 PRIOR APPLICATION NUMBER: 09/603,713 PRIOR FILING DATE: 2000-06-27
                                                                                                                                    PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 2000-00
                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/178,368 PRIOR FILING DATE: 2000-01-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 09/416,901 | PRIOR FILING DATE: 1999-10-13 | PRIOR EPILING DATE: 1999-09-23 | PRIOR EPILING DATE: 1999-09-23 | PRIOR APPLICATION NUMBER: 09/404,133 | PRIOR EPILING DATE: 1999-09-23 | PRIOR EPILING DATE: 1999-09-23 | PRIOR APPLICATION NUMBER: PCT/US99/20/881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Yan, Rigiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE,
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 28341,6280FG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/681,442
CURRENT FILING DATE: 2001-04-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 10
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 73
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Gurney, Mark E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bienkowski, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/09681442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                         60/210,292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 20; DB
Pred. No. 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APP SUBSTRATES THEREFOR, AND US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

```
APPLICANT: John, Varghese
APPLICANT: Maillaird, Michel
APPLICANT: Mailley, Shon R.
APPLICANT: TenBrink, Ruth E.
TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE
FILE REFERENCE: 13615.25USU4
CURRENT APPLICATION NUMBER: US/09/896,139
CURRENT FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/215,323
PRIOR APPLICATION NUMBER: US 60/252,736
PRIOR APPLICATION NUMBER: US 60/252,736
PRIOR FILING DATE: 2000-11-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
""+ hes 4; Conserv:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: Descrip; OTHER INFORMATION: Peptide US-09-845-226-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-896-874-1
                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-896-139-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-896-874-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Fang, Lawrence Y.
APPLICANT: John, Varghese
TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE
FILE REFERENCE: 13615.40USU1
CURRENT APPLICATION NUMBER: US/09/896,874
CURRENT FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/215,323
PRIOR FILING DATE: 2000-06-30
NUMBER OF SEC IN NOC. 0
                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/09896139 Patent No. US20020128255A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn version 3.1 SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US Patent No. US20020016320A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 12
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 9
                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Beck, James P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 NLDA 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NLDA 4
APPLICATION NUMBER: US 60/255,956
FILING DATE: 2000-12-15
APPLICATION NUMBER: US 60/268,497
FILING DATE: 2001-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/09896874
                                                                                                                                                                                                                                                                                                               Gailunas, Andrea
                                                                                                                                                                                                                                                                                                                             Freskos, John N.
                                                                                                                                                                                                                                                                            Jagodizinska, Barbara
                                                                                                                                                                                                                                                                                                                                               Fang, Lawrence Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description of Artificial Sequence: Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
```

```
US-09-864-761-40453; Sequence 40453, Application US/09864761; Patent No. US20020048763A1
                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                           RESULT 22
                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Synthetic US-09-895-843-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Synthetic US-09-896-139-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-895-843-1
                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/09895843 Patent No. US20020143177A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 1
           APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/215,323
PRIOR FILING DATE: 2000-06-30
NUMBER OF SEC. TO TO THE PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Beck, James P.
APPLICANT: Fang, Lawrenc
APPLICANT: Freskos, John
                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/895,843
CURRENT FILING DATE: 2001-06-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE FILE REFERENCE: 13615.41USU1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/295,589
PRIOR FILING DATE: 2001-06-04
NUMBER OF SEQ ID NOS: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/279,779 PRIOR FILING DATE: 2001-03-29
                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH:
                                                                                                                                                                                                          1 NLDA 4
                                                                                                                                                                                         4 NLDA 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 NLDA 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NLDA 4
OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fang, Lawrence Y. Freskos, John N. Gailunas, Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pulley, Shon R.
TenBrink, Ruth E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          John, Varghese
Maillaird, Michel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jagodizinska, Barbara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hom, Roy
                                                                                                                                                                                                                                                     100.0%; ilarity 100.0%; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 20;
Pred. No.
                                                                                                                                                                                                                                                                    Score 20;
Pred. No.
                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
                                                                                                                                                                                                                                                                                   10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10;
                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 12;
                                                                                                                                                                                                                                                                                   Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
RESULT 23
US-09-896-874-9
                                                                                                                                                                               В
                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION:
; OTHER INFORMATION:
US-09-864-761-40453
             Sequence 9, Application US/09896874
Patent No. US20020016320A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                    Matches
APPLICANT: Fang,
                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: MAP TO AC007981.43
OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL 2.7
OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL 3
OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL 3
OTHER INFORMATION: EXPRESSED IN FEAL LIVER, SIGNAL 5
OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL 3
OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL 3
OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL 3
OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 2000-09-21
PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
PRIOR FILING DATE: 2001-01-29
NUMBER OF SEC TO TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Annomax Sequence Listing Engine vers. 1.1 EQ ID NO 40453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: US 09/632,366 PRIOR FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: GB 24263.6 PRIOR FILING DATE: 2000-10-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/864,761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH:
                                                                                                                                                                               23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 60/234,687 FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: PCT/US01/00661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US01/00664 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: PCT/US01/00667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: PCT/US01/00666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 60/236,359 FILING DATE: 2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 2001-01-30 APPLICATION NUMBER: PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/US01/00668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: PCT/US01/00669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 2001-01-30
                                                                                                                                                                               NLDA 26
                                                                                                                                                                                                                      NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                                                                                                                                  4;
                                                                                                                                                                                                                                                             100.0%; ilarity 100.0%; Conservative 0;
Lawrence Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                  Score 20;
Pred. No.
                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                       DB 10; Length 28;
                                                                                                                                                                                                                                                                                                                                                                            SIGNAL =
                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11
                                                                                                                                                                                                                                                                                                                                                                            2.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
2
                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                         0;
```

```
; OTHER INFORMATION: Synthetic US-09-896-139-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-896-139-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: Synthetic US-09-896-874-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                       SOFTWARE: PatentIn version SEQ ID NO 9
                   Query Match
Best Local :
     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 9, Application US/09896139 Patent No. US20020128255A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US 60/255,956
PRIOR FILING DATE: 2000-12-15
PRIOR APPLICATION NUMBER: US 60/268,497
PRIOR FILING DATE: 2001-02-13
PRIOR APPLICATION NUMBER: US 60/279,779
PRIOR EILING DATE: 2001-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: TenBrink, Ruth E.
TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE
FILE REFERENCE: 13615.25USU4
                                                                                                                                      LENGTH: 3
                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/896,139
CURRENT FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/215,323
PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: John, Varghese | TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE FILE REFERENCE: 13615.40USU1 | CURRENT APPLICATION NUMBER: US/09/896,874 | CURRENT FILING DATE: 2001-06-29 | CURRENT FILING DATE: 2001-06-29
                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 9
                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 60/252,736 PRIOR FILING DATE: 2000-11-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Beck, James P.
                                                                                                                                                                                                                      PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/215,323 PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 9
                                                                                                     FEATURE:
                                                                                                                 ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH:
   Local Similarity les 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                      FILING DATE: 2001-03-29
APPLICATION NUMBER: US
                                                                                                                                                        30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          John, Varghese
Maillaird, Michel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jagodizinska, Barbara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gailunas, Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Freskos, John N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pulley, Shon R. TenBrink, Ruth E.
100.0%; Score 20; llarity 100.0%; Pred. No. Conservative 0; Mismatcl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                      2001-06-04
                                                                                                                                                                                                                                                        29
                                                                                                                                                                                                                                      60/295,589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 20;
Pred: No.
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36;
                                 DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10;
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                 Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 30;
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

ΩV

1 NLDA

밁

25

NLDA

28

9

```
밁
망
                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-896-874-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: Synthetic US-09-895-843-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-895-843-9
                                                                                                                           US-09-896-874-4
                                                                                                                                                                NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn version 3.1
SEQ ID NO 4
LENGTH: 32
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/09896874 Patent No. US20020016320A1
                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                            Matches
                                                                                                                                                                                                                                                           APPLICANT: Fang, Lawrence Y.
APPLICANT: John, Varghese
TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE
FILE REFERENCE: 13615.40USU1
CURRENT APPLICATION NUMBER: US/09/896,874
CURRENT FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/215,323
PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 9, Application US/09895843 Patent No. US20020143177A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/895,843
CURRENT FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/215,323
PRIOR FILING DATE: 2000-06-30
NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Pulley, Shon R.
APPLICANT: TenBrink, Ruth E.
TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE
FILE REFERENCE: 13615.41USU1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Beck, James P.
                                                                                                                                FEATURE: OTHER INFORMATION: Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 30
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25 NLDA 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
25 NLDA 28
                             1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NLDA 4
                                                            4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           John, Varghese
Maillaird, Michel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jagodizinska, Barbara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gailunas, Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Freskos, John N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; ilarity 100.0%; Conservative 0;
                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lawrence Y.
                                                                         100.0%;
                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                          Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                red. No. 36;
Mismatches
                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10;
                                                                                         10;
                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 30;
                                                                                         Length 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                          0;
                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
US-09-896-139-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; FEATURE:
; OTHER INFORMATION: Synthetic
US-09-896-139-4
                                                                                                                                                                                                                                                                                                                                                                                        RESULT 28
US-09-895-843-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; Sequence 4, Application US/09896139
; Patent No. US20020128255A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: US 60/252,736
PRIOR FILING DATE: 2000-11-22
PRIOR APPLICATION NUMBER: US 60/255,956
PRIOR FILING DATE: 2000-12-15
PRIOR APPLICATION NUMBER: US 60/268,497
PRIOR FILING DATE: 2001-02-13
PRIOR APPLICATION NUMBER: US 60/279,779
PRIOR FILING DATE: 2001-03-29
PRIOR FILING DATE: 2001-03-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn version 3.1
SEQ ID NO 4
LENGTH: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/09895843 Patent No. US20020143177A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT: Pulley, Shon R.
APPLICANT: TenBrink, Ruth E.
TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE
FILE REFERENCE: 13615.41USU1
CURRENT APPLICATION NUMBER: US/09/895,843
CURRENT FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/215,323
PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                            APPLICANT: Beck, James P.
APPLICANT: Fang, Lawrenc
APPLICANT: Freskos, John
APPLICANT: Gailunas, And
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/896,139
CURRENT FILING DATE: 2001-06-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: John, Varghese
APPLICANT: Maillaird, Michel
APPLICANT: Pulley, Shon R.
APPLICANT: Tenbrink, Ruth E.
TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE
FILE REFERENCE: 13615.25USU4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Beck, James P. APPLICANT: Fang, Lawrence Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 60/215,323 PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 60/295,589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25 NLDA 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4;
                                                                                                                                                            John, Varghese
Maillaird, Michel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gailunas, Andrea
                                                                                                                                                                                                                             Hom, Roy
                                                                                                                                                                                                                                                               Freskos, John N.
                                                                                                                                                                                                      Jagodizinska, Barbara
                                                                                                                                                                                                                                            Gailunas, Andrea
                                                                                                                                                                                                                                                                                    Fang, Lawrence Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jagodizinska, Barbara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Freskos, John N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 20; DB Pred. No. 38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

```
US-09-746-919-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Synthetic US-09-895-843-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 18, Application US/09746919 Patent No. US20020013452A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn version 3.1
                  INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 32
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                        FILING DATE: 19-OCT-1222

FRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/847,741
APPLICATION NUMBER: 09-MAR-1992
                                             REGISTRATION NUMBER: 28,006
REFERENCE/DOCKET NUMBER: 56
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-324-0880
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                   APPLICATION NUMBER: US 07/318,050 FILING DATE: 02-MAR-1989 PRIOR APPLICATION DATA: APPLICATION NUMBER: US 07/969,890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: Dehlinger & Associates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Johnson, Howard M. APPLICANT: Pontzer, Carol H.
                                                                                                                FILING DATE: 30-OCT-1992
ATTORNEY/AGENT INFORMATION:
NAME: Deblinger, Peter J.
                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 10-MAY-1995 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25 NLDA 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    350 Cambridge Ave., Suite
                                  650-324-0960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; ilarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Interferon Tau Compositions and Methods of Use
                                                                                                                                                                                                                                                                                                                                 US 08/139,891
                                                                                                                                                                                                                                                                                                                                                                                     US 08/438,753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/09/746,919
                                                                                                                                                                                                                                                                                                                                                                                                                                        09/045,467
                                                                                   5600-0001.36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 20; DB Pred. No. 38; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
INDIVIDUAL ISOLATE:
; INDIVIDUAL ISOLATE:
US-09-746-919-18
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Synthetic US-09-896-874-6
                                                                                                                                                                                                                                                                                                    US-09-896-139-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-896-874-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 6, Application US/09896874 Patent No. US20020016320A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                          GENERAL
                                                                                                                                                                                                                                                                     Sequence 6, Application US/09896139 Patent No. US20020128255A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn version 3.1 SEQ ID NO 6
                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                       APPLICANT: Pulley, Shon R.
APPLICANT: Pulley, Shon R.
APPLICANT: TenBrink, Ruth E.
TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE
FILE REFERENCE: 13615.25USU4
CURRENT APPLICATION NUMBER: US/09/896,139
CURRENT FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/215,323
                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Fang, Lawrence Y.
APPLICANT: John, Varghese
TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE
FILE REFERENCE: 13615.40USU1
                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US 60/215,323
PRIOR FILING DATE: 2000-06-30
NUMBER OF SEQ ID NOS: 9
PRIOR FILING DATE: 2000-06-30 PRIOR APPLICATION NUMBER: US 60/252,736
                                                                                                                                                                                                                                         APPLICANT: Beck, James P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/896,874
CURRENT FILING DATE: 2001-06-29
                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 33
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
HYPOTHETICAL: N
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                               28 NLDA 31
                                                                                                                                                                                                                                                                                                                                                                                           1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NLDA 4
                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                        4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid
                                                                                                                                 John, Varghese
Maillaird, Michel
                                                                                                                                                                                                            Freskos, John N.
                                                                                                                                                                                               Gailunas, Andrea
                                                                                                                                                                  Jagodizinska, Barbara
                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        : peptide
NO
                                                                                                                                                                                Roy
                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Amino acid sequence of fragment
90-122 of SEQ ID NO:4
                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 20;
Pred No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

Ö

```
RESULT 33
US-09-864-761-47026
; Sequence 47026, Application US/09864761
; Patent NO. US20020048763A1
· GENERAL INFORMATION:
                                                                                                                                                 밁
                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                              ; FEATURE:
; OTHER INFORMATION: Synthetic
US-09-895-843-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-895-843-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: Synthetic US-09-896-139-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Beck, James P.
APPLICANT: Frang, Lawrence
APPLICANT: Freskos, John N
APPLICANT: Gailunas, Andre
APPLICANT: Hom, Roy
APPLICANT: Jagodizinska, E
APPLICANT: Jagodizinska, E
APPLICANT: John, Yarghese
                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn version 3.1
SEQ ID NO 6
LENGTH: 33
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn version 3.1
SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 6, Application US/09895843 Patent No. US20020143177A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: COMPOUNDS TO TREAT ALZHEIMER'S DISEASE FILE REFERENCE: 1361-5.410501
CURRENT APPLICATION NUMBER: US/09/895,843
CURRENT FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/215,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 60/279,779
PRIOR FILING DATE: 2001-03-29
PRIOR APPLICATION NUMBER: US 60/295,589
PRIOR FILING DATE: 2001-06-04
                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 2000-06-30 NUMBER OF SEQ ID NOS: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 33
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match 100.0%;
Local Similarity 100.0%;
nes 4; Conservative 0
                                                                                                                                               28 NLDA 31
                                                                                                                                                                                                               Local Similarity les 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28 NLDA 31
                                                                                                                                                                      1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 60/255,956
FILING DATE: 2000-12-15
APPLICATION NUMBER: US 60/268,497
FILING DATE: 2001-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pulley, Shon R. TenBrink, Ruth E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jagodizinska, Barbara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gailunas, Andrea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Freskos, John N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pulley, Shon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             John, Varghese
Maillaird, Michel
                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                               0;
                                                                                                                                                                                                                              Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 20;
Pred. No.
                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                              10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                            Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 33;
                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
RESULT 34
US-09-864-761-38553
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Homo sapiens
FEATURE:
FEATURE:
OTHER INFORMATION: MAP TO AC005969.4
OTHER INFORMATION: EXPRESSED IN LUNG,
OTHER INFORMATION: EXPRESSED IN ADULT
US-09-864-761-47026
Sequence 38553, Application US/09864761
Patent No. US20020048763A1
GENERAL INFORMATION:
APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K.
                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Annomax Sequence SEQ ID NO 47026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US 60/180,312 PRIOR FILING DATE: 2000-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 09/632,366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH: 34
                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                1 NLDA 4
                                                                                                                                                                                                          7 NLDA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 2001-01-30

**FILING DATE: 2001-01-30

**FILING DATE: 2001-01-30

**APPLICATION NUMBER: PCT/US01/00665

**POLICATION NUMBER: PCT/US01/00665

**POLICATION NUMBER: PCT/US01/00666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00663
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00662
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 2000-08-03
APPLICATION NUMBER: GB 24263.6
FILING DATE: 2000-10-04
APPLICATION NUMBER: US 60/236,359
FILING DATE: 2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 09/608,408
FILING DATE: 2000-06-30
APPLICATION NUMBER: US 09/774,203
FILING DATE: 2001-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/US01/00667 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: PCT FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 60/234,687 FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/US01/00661 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/US01/00664
                                                                                                                                                                                                                                                                                           4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hanzel, David F
Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rank, David R
                                                                                                                                                                                                                                                                                        100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT/US01/00666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Listing Engine vers.
                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                            Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                             SIGNAL LIVER,
                                                                                                                                                                                                                                                                                                                                 DB 10;
                                                                                                                                                                                                                                                                                                                                                                                             = 0.59
                                                                                                                                                                                                                                                                                                                             Length 34;
                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                               .
                                                                                                                                                                                                                                                                                                                                                                                               0.52
                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                           0
```

```
RESULT 35
US-09-864-761-42457
; Sequence 42457, Application US/09864761
; Patent No. US20020048763A1
                                                                                                                                                                QΥ
                                                                                                                                 망
                                                                                                                                                                                                         Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 38553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Annomax
                                                                                                                                                                                                                                                                                                                                                 OTHER
OTHER
OTHER
OTHER
OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
OTHER INFORMATION: MAP TO AC005237.2
OTHER INFORMATION: EXPRESSED IN FETAL
OTHER INFORMATION: EXPRESSED IN BRAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 4911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 60/180,312 PRIOR FILING DATE: 2000-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ITLE OF INVENTION: HUMAN ITLE OF INVENTION: GENE
                                                                                                                              26
                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 2001-01-30
APPLICATION NUMBER: US 60/234,687
FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 09/608,408
FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: PCT/US01/00663
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00662
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 2000-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 09/774,203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/US01/00669 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US01/00664 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/US01/00667 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 60/207,456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 60/236,359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 2000-10-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                              NLDA
                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: PCT/US01/00661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: PCT/US01/00668
                                                                                                                                                                    NLDA 4
                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                              INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                              29
                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                 N. EXPRESSED IN FETAL LIVER, SIGNAL = 1.7

N. EXPRESSED IN BRAIN, SIGNAL = 1.9

N. EXPRESSED IN BONE MARROW, SIGNAL = 1.5

N. EXPRESSED IN PLACENTA, SIGNAL = 1.6

N. EXPRESSED IN HEART, SIGNAL = 1.9

N. EXPRESSED IN ADULT LIVER, SIGNAL = 1.7

N. EXPRESSED IN LUNG, SIGNAL = 1.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence Listing Engine vers. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000-08-03
NUMBER: GB 24263.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-05-
                                                                                                                                                                                                     100.0%; S
100.0%; F
itive 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-05-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT/US01/00666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US 09/632,366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26
                                                                                                                                                                                                                          Score 20;
Pred. No.
                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                             10;
                                                                                                                                                                                                       ;
                                                                                                                                                                                                                                             Length 39;
                                                                                                                                                                                                       Indels
                                                                                                                                                                                                       0
                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                     0;
```

```
; OTHER INFORMATION:
; OTHER INFORMATION:
US-09-864-761-42457
밁
                             δÃ
                                                             Matches
                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Annomax
SEQ ID NO 42457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                        OTHER
OTHER
OTHER
OTHER
OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Hanzel, David K. |
APPLICANT: Chen, Wensheng |
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FO
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
FILE REFERENCE: Acomica-X-1 |
                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 09/632,366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US 60/180, 312 PRIOR FILING DATE: 2000-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Penn, Sharron G
APPLICANT: Rank, David R.
                                                                                                                                                                                                                                                                                                                           TYPE: PRT
ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US 60/207,456
                                                                                                                                                                                                                                                    OTHER INFORMATION:
                                                                                                                                                                                                                                                                                   OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: MAP TO AC011510.3
                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                 ENGTH:
40
                             1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: PCT/US01/00667
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00664
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 2000-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00670
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 2000-08-03
APPLICATION NUMBER: GB 24263.6
                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 2001-0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 2001-01-30 APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: PCT/US01/00666
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: PCT/US01/00661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT, FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                        INFORMATION:
NLDA 43
                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                 60
                                                                          Similarity
                                                           Conservative
                                                                                                                                                                                                                                                                                                                                sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER: 2000-06-30 US 09/774,203
                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                   EXPRESSED I
EXPRESSED I
EXPRESSED I
EXPRESSED I
EXPRESSED I
EXPRESSED I
EXPRESSED I
EXPRESSED I
EXPRESSED I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-01-30
                                                                                                                                        EST_HUMAN
SWISSPROT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000-10-04
                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PCT/US01/00668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCT/US01/00669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       us 60/236,359
                                                                                                                                                                                                                                                                                                                                                                                           Listing
                                                                                                                                  ED IN ADULT LIVER, SIGNAL = 1.9
ED IN HEART, SIGNAL = 2.4
ED IN LUNG, SIGNAL = 2.4
ED IN PLACENTA, SIGNAL = 1.7
ED IN HELA; SIGNAL = 2.4
ED IN BONE MARROW, SIGNAL = 2.7
AN HIT: BE148597.1, EVALUE 2.006
OT HIT: P24460, EVALUE 4.00e-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/234,687
                                                                                                                                                                                       IN BRAIN,
IN ADULT I
IN HEART,
IN LUNG, S
IN PLACENT
IN HELA, S
IN FETAL I
                                                             0;
                                                                        Score 20;
Pred. No.
                                                           red. No. 73;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                             Engine vers.
                                                                                                                                                                                                                                                                                SIGNAL
                                                                                         10;
                                                                                                                                                      EVALUE 2.00e-29
                                                           0;
                                                                                                                                          4.00e-08
                                                                                       Length 60;
                                                           Indels
                                                           0;
                                                         Gaps
                                                           0,
```

Best Local Similarity

100.0%;

Pred. No.

```
RESULT 36
US-09-864-761-41585
                                                                                                                                            OTHER INFORMATION: MAP TO ALL21771.17
OTHER INFORMATION: EXPRESSED IN BAULT L:
OTHER INFORMATION: EXPRESSED IN BRAIN. S
OTHER INFORMATION: EXPRESSED IN HELA, S:
OTHER INFORMATION: EXPRESSED IN HELA, S:
OTHER INFORMATION: EXPRESSED IN HEART. S
OTHER INFORMATION: EXPRESSED IN HEART. S
OTHER INFORMATION: EXPRESSED IN HEART.
  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 41585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 41585, Application US/09864761 Patent No. US20020048763A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 09/632,366 PRIOR FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US 60/207,456 PRIOR FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/864,761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YFULICANT: Chen, Wensheng
ITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC
ITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICHAELE
                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                       ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 2001-01-30
APPLICATION NUMBER: US 60/234,687
FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: PCT/US01/00666
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00667
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: GB 24263.6 FILING DATE: 2000-10-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 09/608,408 FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: PCT/US01/00661 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 60/236,359 FILING DATE: 2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 2000-06-30 APPLICATION NUMBER: US 09/774,203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: PCT/US01/00668 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: PCT/US01/00669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: PCT/US01/00664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hanzel,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence Listing Engine vers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                David K.
                                                                             EST_HUMAN
SWISSPROT
                                                                                                                             EXPRESSED
     100.0%;
                                                                   D IN ADULT LIVER, SIGNAL = 4.1
D IN BRAIN, SIGNAL = 4.5
D IN LUNG, SIGNAL = 5
D IN HELA, SIGNAL = 4.7
D IN PLACENTA, SIGNAL = 4.5
D IN HEART, SIGNAL = 4.5
D IN FETAL LIVER, SIGNAL = 5.1
D IN BONE MARROW, SIGNAL = 5.1
IN HIT: AU130765.1, EVALUE 1.00e-30
PT HIT: Q22712, EVALUE 1.50e+00
     Score 20;
     DВ
  10;
Length 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROBES USEFUL
```

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ğ
                                                                                       ; NAME/KEY: SITE
; LOCATION: (70)
; OTHER INFORMATION:
US-09-925-297-469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo sapiens US-10-107-371-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 37
US-10-107-371-1
                                                                                                                                                          SOFTWARE: PatentIn Ver. 2
SEQ ID NO 469
LENGTH: 76
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 38
US-09-925-297-469
                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Rosen et
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/10107371 Patent No. US20020146390A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                              Matches
                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                       Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 469, Application US/09925297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/925,297
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05989
PRIOR FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/107,371
CURRENT FILING DATE: 2002-03-28
PRIOR APPLICATION NUMBER: US 09/496,273
PRIOR FILING DATE: 2000-02-01
PRIOR APPLICATION NUMBER: US 08/852,212
PRIOR FILING DATE: 1997-05-06
                                                                                                                                                                                                                                                                                                                                         APPLICANT: Rosen et al. TITLE OF INVENTION: Nuc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/017,871
PRIOR FILING DATE: 1996-05-14
NUMBER OF SEQ ID NOS: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Pelus, Louis M.
TITLE OF INVENTION: Method of Treating Sepsis and ARDS Using Chemokine Beta-6
FILE REFERENCE: 1488.1520005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: White, John R. APPLICANT: Pelus, Louis
                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 928
                                                                                                                                                                                                                                                        PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 7
TYPE: PRT
                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62 NLDA 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24 NLDA 27
                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 NLDA 4
 1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NLDA 4
                              4.
                                                                                                                                                                                                                                                                                                                                                                                                       US20020081659A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                              Conservative
                                                                                                                                                                                                                                                        1999-03-12
                                                                                                       Xaa equals any of the naturally
                                                                                                                                                                                                                                                                                                                                                         Nucleic Acids, Proteins
                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 20;
Pred. No.
                                              Score 20;
Pred. No.
                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                               93;
                                                                                                                                                                                                                                                                                                                                                            and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12;
                                                          10;
                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 70;
                                                          Length
                                                                                                       occurring L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                       acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (as
```

```
RESULT 40
US-09-864-761-33423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Xaa equals US-09-764-877-1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-764-877-1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prior application data removed -
NUMBER OF SEQ ID NOS: 4031
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1103, Application US/09764877 Patent No. US20020147140A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 60/207,456 PRIOR FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: US 60/180,312 PRIOR FILING DATE: 2000-02-04
                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/764,877 CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: PC005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: (60)
OTHER INFORMATION: Xaa equals
NAME/KEY: SITE
LOCATION: (69)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 NLDA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NLDA 4
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00669
FILING DATE: 2001-01-30
                                                    APPLICATION NUMBER: PCT/US01/00667
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00664
                                                                                                                                APPLICATION NUMBER: US 60/236,359
FILING DATE: 2000-09-27
APPLICATION NUMBER: PCT/US01/00666
                                                                                                                                                                                                                                    APPLICATION NUMBER: US 09/632,366 FILING DATE: 2000-08-03
                                                                                                                                                                                             APPLICATION NUMBER: GB 24263.6 FILING DATE: 2000-10-04
                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 33423, Application US/09864761
5. US20020048763A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rank, David R.
Hanzel, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                      2000-05-26
                                                                                                                  2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        any of the naturally occurring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           any of the naturally occurring L-amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              refer to PALM or file wrapper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                               ACID PROBES USEFUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

QΥ

1 NLDA 4

```
OTHER INFORMATION: MACOTHER INFORMATION: EXICATION EXICATION EXICATION: EXICA
                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:

APPLICANT: Frank Michiels et al.

TITLE OF INVENTION: Inproved Barstar Gene
FILE REFERENCE: 2428-0108P
CURRENT APPLICATION NUMBER: US/09/970,921
CURRENT FILING DATE: 2001-10-05
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin Ver. 2.0
SECOLD NO 2
                                                                                                                  ; OTHER INFORMATION: Description of Artificial Sequence: protein US-09-970-921-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 41
US-09-970-921-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 2, Application US/09970921 Patent No. US20020133845A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 49117
SOFTWARE: Annomax Sequence Listing
SEQ ID NO 33423
LENGTH: 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                             LENGTH: 90
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: PCT/US01/00661
PRIOR FILING DATE: 2001-01-30
                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Homo FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
Local Similarity
ses 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: PCT/US01/00668 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US 09/774,203 FILING DATE: 2001-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: PCT/US01/00670 FILING DATE: 2001-01-30 |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 53
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-09-21
NUMBER: US 09/608,408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MAP TO
                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC007041.
   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IN FETÄL LIVER, SIGNAL = 2.3
IN HELA, SIGNAL = 1.4
IN ADULT LIVER, SIGNAL = 2.1
IN BRAIN, SIGNAL = 3.5
HIT: AII14743.1, EVALUE 1.00e-47
HIT: Q12446, EVALUE 9.10e-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IN PLACENTA, SIGNAL - 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IN HEART, SIGNAL = 1.
                        Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 20;
Pred! No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BONE MARROW, SIGNAL = HEART, SIGNAL = 1.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Engine vers. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 1.1e+02;
thes 0;
                     1.1e+02;
                                                            DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 10;
                                                      Length 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 90
Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.5
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

밁

34

37

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-864-761-43579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: Description of Artificial Sequence: protein US-09-970-921-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         us-09-970-921-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/970,921
CURRENT FILING DATE: 2001-10-05
NUMBER OF SEQ ID NOS: 10
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Frank Michiels et al.
TITLE OF INVENTION: Improved Barstar Gene
FILE REFERENCE: 2428-0118B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 4, Application US/09970921
Patent No. US20020133845A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 43579, Application US/09864761 Patent No. US20020048763A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
PRIOR APPLICATION NUMBER: US 09/632,366
PRIOR FILING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR FILING DATE: 2000-10-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 2000-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: Hanzel, David K
APPLICANT: Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/864,761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35 NLDA 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NLDA 4
                                                                                                                                                                                                           FILING DATE: 2001-01
APPLICATION NUMBER:
FILING DATE: 2001-01
                                     APPLICATION NUMBER: PCT/US01/00663 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US01/00666 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 60/236,359 FILING DATE: 2000-09-27
APPLICATION NUMBER: PCT/US01/00662 FILING DATE: 2001-01-30
                                                                                 APPLICATION NUMBER: PCT/US01/00668 FILING DATE: 2001-01-30
                                                                                                                                               APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                                                       APPLICATION NUMBER: PCT/US01/00669
                                                                                                                                                                                                                                                                         APPLICATION NUMBER: PCT/US01/00667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hanzel, David F
Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  David R.
l, David K.
                                                                                                                           2001-01-30
                                                                                                                                                                     2001-01-30
                                                                                                                                                                                                                                                     2001-01-30
                                                                                                                                                                                                           2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                               PCT/US01/00664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 20; DB 10;
Pred. No. 1.1e+02;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACID PROBES USEFUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
밁
RESULT 45
US-09-974-298-4
                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 44
US-09-775-938A-20
                                                                                                                                                                                                                      US-09-775-938A-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-864-761-43579
                                                                                                                                                                                                                                                                                        SOFTWARE: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Annomax Sequence Listing Engine vers.
SEQ ID NO 43579
LENGTH: 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Haygood, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 20, Application US/09775938A Patent No. US20020081665A1
                                                                                                                                               Matches
                                                                                                                                                            Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/US01/00670
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR APPLICATION NUMBER: US 60/234,687
PRIOR FILING DATE: 2000-09-21
PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 2000-06-30
PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: PCT/US00/21326
PRIOR FILING DATE: 2000-08-04
PRIOR APPLICATION NUMBER: US 60/147,283
PRIOR FILING DATE: 1999-08-04
                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/775,938A CURRENT FILING DATE: 2001-08-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Bryostatins, Bryopyrans and Polyketides: Compositions and Meth FILE REFERENCE: 1133.010US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US (PRIOR FILING DATE: 2001-01-29 NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Endobugula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                       LENGTH: 100
                                                                        69 NLDA 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31 NLDA 34
                                                                                                                                            Local Similarity les 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                        1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                          FastSEQ for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Allen, S.W.
Hildebrand, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Davidson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MAP TO AC005541.1

EXPRESSED IN LUNG, SIGNAL = 0.83

EXPRESSED IN BORE MARROW, SIGNAL = 1.1

EXPRESSED IN PLACENTA, SIGNAL = 0.78

EXPRESSED IN FETAL LIVER, SIGNAL = 0.86

EXPRESSED IN BRAIN, SIGNAL = 0.89

EXPRESSED IN BRAIN, SIGNAL = 0.89

EXPRESSED IN BRAIN, SIGNAL = 0.89

EXPRESSED IN ADULT LIVER, SIGNAL = 0.89

EXPRESSED IN ADULT LIVER, SIGNAL = 0.89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S.K.
                                                                                                                                                                                                                                     sertula
                                                                                                                                                                                                                                                                                                          Windows Version 4.0
                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09/774,203
                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 20;
Pred. No.
                                                                                                                                                              Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.1e+02;
hes 0;
                                                                                                                                             DB 10;
1.2e+02;
les 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 10;
                                                                                                                                                                               Length 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 92;
                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                               0
```

Sequence 4, Application US/09974298 Patent No. US20020156263A1

```
GENERAL INFORMATION:
APPLICANT: Chen, Huei-Mei
TITLE OF INVENTION: GENES EXPRESSED IN BREAST CANCER
FILE REFERENCE: PA-0037 P
CURRENT APPLICATION NUMBER: US/09/974,298
CURRENT FILING DATE: 2001-10-04
PRIOR APPLICATION NUMBER: 60/238,331
PRIOR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 194
SOFTWARE: PERL Program
SEQ ID NO 4
LENGTH: 103
TYPE: PRT
ORGANISM: Homo sapiens
FEAUURE:
NAME/KEY: misc_feature
OTHER INFORMATION: Incyte ID NO. US20020156263A1 755197CD1
US-09-974-298-4
                                                                                          В
                                                                                                                              QΥ
Search completed: February 6, 2003, 11:39:48 Job time: 6.83333 secs
                                                                                                                                                                        Query Match 100.0%; Score 20; DB 9; Length 103; Best Local Similarity 100.0%; Pred. No. 1.3e+02; Matches 4; Conservative 0; Mismatches 0; Indels
                                                                                     1 NLDA 4
||||
65 NLDA 68
                                                                                                                                                                          0;
                                                                                                                                                                          Gaps
                                                                                                                                                                          0;
```

```
Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
                   Pending_Patents_AA_Main:*

1: /cgn2_6/ptodata/1/paa/USO6_COMB.pep:*

2: /cgn2_6/ptodata/1/paa/USO6_COMB.pep:*

3: /cgn2_6/ptodata/1/paa/USO6_COMB.pep:*

4: /cgn2_6/ptodata/1/paa/USO8_COMB.pep:*

5: /cgn2_6/ptodata/1/paa/USO8_COMB.pep:*

6: /cgn2_6/ptodata/1/paa/USO8_COMB.pep:*

7: /cgn2_6/ptodata/1/paa/USO8_COMB.pep:*

9: /cgn2_6/ptodata/1/paa/USO8_COMB.pep:*

10: /cgn2_6/ptodata/1/paa/USO8_COMB.pep:*

11: /cgn2_6/ptodata/1/paa/USO8_COMB.pep:*

12: /cgn2_6/ptodata/1/paa/USO8_COMB.pep:*

13: /cgn2_6/ptodata/1/paa/USO8_COMB.pep:*

14: /cgn2_6/ptodata/1/paa/USO8_COMB.pep:*

15: /cgn2_6/ptodata/1/paa/USO8_COMB.pep:*

16: /cgn2_6/ptodata/1/paa/USO9_COMB.pep:*

16: /cgn2_6/ptodata/1/paa/USO9_COMB.pep:*

16: /cgn2_6/ptodata/1/paa/USO93_COMB.pep:*

17: /cgn2_6/ptodata/1/paa/USO93_COMB.pep:*

18: /cgn2_6/ptodata/1/paa/USO93_COMB.pep:*

20: /cgn2_6/ptodata/1/paa/USO95_COMB.pep:*

21: /cgn2_6/ptodata/1/paa/USO95_COMB.pep:*

22: /cgn2_6/ptodata/1/paa/USO96_COMB.pep:*

23: /cgn2_6/ptodata/1/paa/USO96_COMB.pep:*

24: /cgn2_6/ptodata/1/paa/USO96_COMB.pep:*

25: /cgn2_6/ptodata/1/paa/USO96_COMB.pep:*

26: /cgn2_6/ptodata/1/paa/USO96_COMB.pep:*

27: /cgn2_6/ptodata/1/paa/USO96_COMB.pep:*

28: /cgn2_6/ptodata/1/paa/USO96_COMB.pep:*

29: /cgn2_6/ptodata/1/paa/USO96_COMB.pep:*

20: /cgn2_6/ptodata/1/paa/USO96_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT943-6
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4569144 segs, 644733110 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 February 6, 2003, 11:16:59; Search time 133.167 Seconds (without alignments)
19.366 Million cell updates/sec
       15:
16:
17:
18:
19:
20:
20:
21:
22:
23:
24:
26:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 nlda 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.3 Compugen Ltd.
/cgn2_6/ptodata/1/paa/US60_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7119
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

თ	5	4	ω	۵	1	Result No.	
20	20	20	20	20	20	Score	
100.0	100.0	100.0	100.0	100.0	100.0	Query Match Lengt	ď
4	4	4	4	4	4	Query Match Length DB	
19	19	18	18	٢	-	DB	
US-09-548-365D-66	US-09-548-365A-66	US-09-416-901B-66	US-09-416-901A-66	PCT-US01-00798-66	PCT-US01-00797-66	ID	
Sequence 66, Appl	Sequence 66, Appl	Sequence 66, Appl	Sequence 66, Appl	Sequence 66, Appl	Sequence 66, Appl	Description	

45	44	43	42	41	40	39	38	37	36	35	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	æ	7
																									20 1													
.00.0	00.0	.00.0	.00.0	.00.0	.00.0	.00.0	.00.0	.00.0	.00.0	00.0	.00.0	.00.0	.00.0	00.0	00.0	.00.0	.00.0	.00.0	.00.0	00.0	00.0	00.0	00.0	.00.0	100.0	.00.0	00.0	00.0	.00.0	.00.0	00.0	00.0	00.0	.00.0	.00.0	.00.0	00.0	00.0
9	œ	8	œ	8	5	ហ	υī	տ	G.	ر ت	ъ	5	υī	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
18	20	20			21	21	21	21	21	19	18			27	23	22	21	21	21	21	21	20	20	20	19	19	19	19	19	19	19	19	19	19	19	19	19	19
-09-471-6	-09-668-314B-	S-09-668-314A-7	-09-277-229	T-US02-15590	-09-724-571	-09-724-569	-09-724-568	-09-724-566	-09-723-739	-09-501-708	-471-669	8-485-152-2	T-US96	-60-275-251-14	S-09-908-943	-09-869-414	S-09-795-847	S-09-794-	S-09-794-925	S-09-794-748	-09-794-743	-09-681-442-66	-09-668-314B-7	-09-668-314A-7	-09-551-853	-09-551-853A-6	-09-548-376D-6	-09-548-376A-6	-09-548-373D-6	-09-548-373A-6	-09-548-370D-6	S-09-548-370A-6	-09-548-369E-6	-09-548-369A-6	S-09-548-368D-6	-09-548-368A-6	8-09-548-366	6в-6
52,	71,	e 7	e 17,	25	equence 51,	e 51,	51,	51,	51,	51,	e 51,	۷,	2, App	equence 142,	142,		66,	e 66,	66,	e 66,	e 66,	e 66,	e 76,	e 76,	66,	66,	e 66,	e 66.	66,	66	66,	e 66,	е 66,	e 66,	e 66,	e 66,	e 66,	Sequence 66, Appl

ALIGNMENTS

S

PC3			PC:
SOFTWARE: Pate SEQ ID NO 66 LENGTH: 4 TYPE: PRI ORGANISM: Art FEATURE: OTHER INFORMA PCT-USO1-00797-66	PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR	TITLE FILE CURR CURR PRIO PRIO PRIO	RESULT 1 PCT-US01-00797-66 ; Sequence 66, Application PC/TUS0100797 ; GENERAL INFORMATION: ; APPLICANT: Bienkowski et al. ; TAPPLICANT: Bienkowski et al.
OFTWARE: Q ID NO 6 LENGTH: 4 TYPE: PRT ORGANISM: FEATURE: OTHER INF	RRRRRR PI PI PI	E OF REFENT	1 nce nce ican
RTI M: A: NFORU	TING PLICE PLICE PLICE PLICE PLICE	INV EREN APPL FILII FILII PLIC	797-1 66, 1
SOFTWARE: PATENTIN Ver. 2.0 SOFTWARE: PATENTIN Ver. 2.0 LENGTH: 4 TYPE: PRT ORGANISM: Artificial Sequence FEATURE: OTHER INFORMATION: Descriptio -USO1-00797-66	PRIOR FILING DATE: 1999-09-23 PRIOR APPLICATION NUMBER: 09/404,133 PRIOR FILING DATE: 1999-09-23 PRIOR APPLICATION NUMBER: PCT/US99/2 PRIOR TILING DATE: 1999-09-23 PRIOR APPLICATION NUMBER: 60/101,594 PRIOR FILING DATE: 1998-09-24	TITLE OF INVENTION: THEREFOR FILE REFERENCE: 28341/6280M2 CURRENT APPLICATION NUMBER: PCT/US01 CURRENT FILING DATE: 2001-05-25 PRIOR APPLICATION NUMBER: 09/416,901 PRIOR FILING DATE: 1999-10-13 PRIOR APPLICATION NUMBER: 60/155,493 PRIOR APPLICATION NUMBER:	ULT 1 -US01-00797-66 equence 66, Application PC/T ENERAL INFORMATION: APPLICANT: Bienkowski et al. TITLE OF INVENTION: ALZHFIME
n Ve	19 19 19 19 19 19 19 19 19 19 19 19 19 1	ON: 28341 CON N TE: NUM 1 NUM 1 19	Cati N: N:
seq escr	99-0 99-0 99-0 99-0 99-0	THER /628 /628 UMBE 200 BER: 99-1	on p
.0 uence	: 1999-09-23 : 1999-09-23 : 1999-09-23 : NUMBER: PCT/US99/2 : 1999-09-23 : UMBER: 60/101,594 : 1998-09-24	EFOR 0M2 0M2 1-05 1-05 09/0	C/TU:
on e	404,1 /US99	CT/US -25 416,9	S0100
Art	FILING DATE: 1999-09-23 APPLICATION NUMBER: 09/404,133 FILING DATE: 1999-09-23 APPLICATION NUMBER: PCT/US99/20881 FILING DATE: 1999-09-23 APPLICATION NUMBER: 60/101,594 FILING DATE: 1998-09-24	TITLE OF INVENTION: THEREFOR FILE REFERENCE: 28341/6280M2 CURRENT APPLICATION NUMBER: PCT/US01/00797 CURRENT FILING DATE: 2001-05-25 PRIOR APPLICATION NUMBER: 09/416,901 PRIOR FILING DATE: 1999-10-13 PRIOR FILING DATE: 1999-10-13 PRIOR APPLICATION NUMBER: 60/155,493	ULT 1 -US01-00797-66 equence 66, Application PC/TUS0100797 ENERAL INFORMATION: ENERAL INFORMATION: EAPPLICANT: Bienkowski et al. TITLE OF INVENTION: ALZHETMER'S DISPASE
OFTWARE: Patentin Ver. 2.0 OFTWARE: Patentin Ver. 2.0 OFTWARE: Patentin Ver. 2.0 OFTWARE: PRT TYPE: PRT OFTWARE: Artificial Sequence PERATURE: PERATURE: PRT OTHER INFORMATION: Description of Artificial Sequence: Peptide US01-00797-66	81	0797	ສ ທ ອ
ial s			SEC BETASE
Seque			
ince:			A D D D
Рер			S II B S
tide			ода прадрамента преверов.
		i	T
			ਹ ਹ ਹ ਹ
			P C C C C C C C C C C C C C C C C C C C

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCT-US01-00798-66
; Sequence 66, Application PC/TUS0100798
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCT-US01-00798-66
                                                                                                                                                                                                                                                                                                                         Sequence 66, Applica GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                           -09-416-901A-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                             PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                            APPLICANT: Parodi, Luis A.
APPLICANT: Yan, Rigiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE,
TITLE OF INVENTION: THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
          PRIOR APPLICATION NUMBER: 60/PRIOR FILING DATE: 1998-09-24
                                                                                                                PRIOR APPLICATION NUMBER: 60/PRIOR FILING DATE: 1999-09-23
                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/416,901A CURRENT FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: PCT/US01/00798 CURRENT FILING DATE: 2001-05-29
                                                                PRIOR APPLICATION NUMBER:
                                                                                                                                                                                        FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILE REFERENCE: 28341/6280M1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES TITLE OF INVENTION: THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Bienkowski et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
ses 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NLDA 4
SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                          Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                            Gurney, Mark E
                                                                                                                                                                                                                                                                                                                                           Application US/09416901A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                    28341/6280A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                            1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.0
                                                                                                                                  60/155,493
                                60/101,594
                                                                PCT/US99/20881
                                                                                                09/404,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of Artificial Sequence: Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .2e+06;
s 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 4;
                                                                                                                                                                                                                     APP SUBSTRATES THEREFOR, AND USE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
```

```
RESULT 5
US-09-548-365A-66
; Sequence 66, Application US/09548365A
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Description of Artificial Sequence: Peptide US-09-416-901a-66 \,^{\circ}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-416-901B-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-416-901B-66
                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 4; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 66
LENGTH: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                              APPLICANT:
                                        PRIOR APPLICATION NUMBER: 60/
                                                                         FILE REFERENCE: 28341/6280E
CURRENT APPLICATION NUMBER: US/09/548,365A
CURRENT FILING DATE: 2000-04-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
                              PRIOR APPLICATION NUMBER:
                                                                                                                            APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE,
TITLE OF INVENTION: THEREFOR
                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/416,901B
CURRENT FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: GURNEY ET AL.
                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: 29915/6280A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Synthetic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                           1 NLDA 4
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                              NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PatentIn version 3.1
                                                                                                                                                                                             Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                             Gurney, Mark E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/09416901B
                                                                                                                                                                              Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                 1999-09-2
                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT/US99/20881
                           09/404,133
PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                              Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
Pred!
                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20;
                                                                                                                                                                                                                                                                                                                                                                                                                              20;
                                                                                                                                                                                                                                                                                                                                                                                                                              4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APP SUBSTRATES THEREFOR AND USE
                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 4;
                                                                                                                                               APP SUBSTRATES THEREFOR, AND
                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

```
CURRENT FILING DATE: 2000-04-12

PRIOR APPLICATION NUMBER: US 60/155,493

PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1999-09-23

PRIOR FILING DATE: 1999-09-23

PRIOR APPLICATION NUMBER: US 60/101,594

PRIOR FILING DATE: 1998-09-24

NUMBER OF SEQ ID NOS: 73

SOFTWARR: DS+0------
                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                 US-09-548-366B-66
Sequence 66, Application US/09548366B
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-548-365D-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: Description of Artificial Sequence: Peptide US-09-548-365A-66
                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 66, Application US/09548365D GENERAL INFORMATION: APPLICANT: GURNEY ET AL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS:
SOFTWARE: Patentin V
SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -09-548-365D-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES TITLE OF INVENTION: THEREOF FILE REFERENCE: 29915/6280E CURRENT APPLICATION NUMBER: US/09/548,365D CURRENT FILING DATE: 2000-04-12 CURRENT FILING DATE: 2000-04-12
                                  TITLE OF INVENTION: ALZHEIMER TITLE OF INVENTION: THEREFOR FILE REFERENCE: 28341/6280J
CURRENT APPLICATION NUMBER: US/09
CURRENT FILING DATE: 2000-04-12
                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Synthesized peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 4
                                                                                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 100 les 4; Conservative
                                                                                                                                                                                                                                                                                                  1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NOS: 71
Patentin Ver. 2.0
                                                                                          Yan, Riqiang
                                                                                                                             Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                       Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                       ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                 US/09/548,366B
                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 20; DB
Pred. No. 4.2
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                         Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                         DB 19;
. 4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                          Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                         USES
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                    RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: Synthetic peptide US-09-548-366D-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; OTHER INFORMATION: Description of Artificial Sequence: Peptide US-09-548-366B-66
                                                                                                                                                                                                                US-09-548-368A-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-548-366D-66
                                                                    Sequence 66, Application US/09548368A
GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Bienkowski, Michael J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 66, Application US/09548366D GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1998-
NUMBER OF SEQ ID NOS: 71
SOFTWARE: Patentin Ver. 3
SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/548,366D CURRENT FILING DATE: 2000-04-12 PRIOR APPLICATION NUMBER: US 60/155,493 PRIOR FILING DATE: 1999-09-23 PRIOR APPLICATION NUMBER: US 09/404,133 PRIOR FILING DATE: 1999-09-23 PRIOR PRIOR PRIOR PRIOR PRIOR STATE: 1999-09-23 PRIOR P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 09/
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT,
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 6
PRIOR FILING DATE: 1999-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: 29915/6280J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT ORGANISM: Artificial sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                            1 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          h 100.0%;
Similarity 100.0%;
4; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.
Gurney, Mark E.
Bienkowski, Michael J.
Heinrikson, Robert L.
Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; ilarity 100.0%; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-09-24
OS: 71
n Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09/404,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/155,493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 20; DB 19;
Pred. No. 4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 20; DB 19;
Pred. No. 4.2e+06;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APP SUBSTRATES THEREFOR AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

US

APPLICANT:

APPLICANT:

```
RESULT 11
US-09-548-369A-66
                                                                                                            B
                                                                                                                                                                                                                                                ; OTHER INFORMATION: Synthesized peptide US-09-548-368D-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-548-368D-66
Sequence 66, Application US/09548369A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION: Description of Artificial Sequence: US-09-548-368A-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity luv.
                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS:
SOFTWARE: PatentIn ver
SEQ ID NO 66
                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/OCURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: 60/15;
PRIOR FILING DATE: 199-09-23
PRIOR APPLICATION NUMBER: 09/40
PRIOR FILING DATE: 199-09-24
PRIOR APPLICATION NUMBER: PCT/U
PRIOR FILING DATE: 199-09-23
PRIOR FILING DATE: 199-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 66, Application US/09548368D GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/548,368D CURRENT FILING DATE: 2000-04-12
                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE,
                                                                                                                                                                                                                                                                                         ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILE REFERENCE: 29915/6280C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: SOFTWARE: Patentin V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH:
                                                                                                                                                                                             Local Similarity
                                                                                                                                           1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NLDA 4
                                                                                                          NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PatentIn Ver. 2.0
                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28341/6280C
                                                                                                                                                                                                                                                                                                                                                                version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JMBER: 09/404,133
1999-09-23
                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALZHEIMER'S DISEASE SECRETASE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/155,493
                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/09/548,368A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                        Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 20; DB 19;
Pred. No. 4.2e+06;
                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                      4.2e+06;
                                                                                                                                                                                                        DB 19;
                                                                                                                                                                                                     Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APP SUBSTRATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APP SUBSTRATES THEREFOR, AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide
                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              THEREFOR AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

밁

NLDA

```
Qy
                                                                                           OTHER INFORMATION: Synthesized US-09-548-369E-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-548-369E-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Description of Artificial Sequence: Peptide US-09-548-369A-66
                                                  Query Match
Best Local
                               Matches
                                                                                                                                                                                                SOFTWARE: Pa
                                                                                                                                                                                                                                                                                                                                                                      Sequence 66, Application US/09548369E
GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.

APPLICANT: GURNEY ET AL.

TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR TITLE OF INVENTION: AND USES
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 29915/6280G
CURRENT APPLICATION NUMBER: US/09/548,369E
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US/09/548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: 1
SEQ ID NO 66
                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/2088:
PRIOR FILING DATE: 1998-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US 60/155,493 PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR AFFILING DATE: 1999-09-24
PRIOR APPLICATION NUMBER: 60/1
PRIOR APPLICATION STEEL 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILE REFERENCE: 28341/6280G
CURRENT APPLICATION NUMBER: US/09/548,369A
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
                                                                                                                                 ORGANISM: Artificial sequence FEATURE:
                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING LALL.

PRIOR APPLICATION NUMBER: PCT,
PRIOR APPLICATION 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 09/PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE,
                                                                                                                                                                                  ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                               Local Similarity tes 4; Conserv
1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 NLDA 4
                                                                                                                                                                                                               PatentIn version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Heinrikson,
                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bienkowski, Michael J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gurney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mark E
                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Robert L.
                                                                                                                                                                                                                                                                                           PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09/404,133
                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                             Score 20;
Pred. No.
                                                                                                           peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
Pred.
                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20;
No.
                           . 4.2e+06;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 19;
                                                         Length 4;
                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APP SUBSTRATES THEREFOR, AND
                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Watches 4; Conserva
                                                           ; OTHER INFORMATION: Synthetic peptide US-09-548-370D-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-548-370D-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Description of Artificial Sequence: Peptide
US-09-548-370A-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 66, Application US/09548370D GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
                                                                                                                                                                         PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
SOFTWARE: PatentIn version 3.1
SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 66, Applica GENERAL INFORMATION:
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATE: 1999 PRIOR FILING DATE: 1999 PRIOR APPLICATION NUMBER: 60/1 PRIOR APPLICATION NUMBER: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ·09-548-370A-66
                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, TITLE OF INVENTION: THEREOF FILE REFERENCE: 29915/6280D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1999-C
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1999-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/2088:
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US 60/155,493 PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/548,370D CURRENT FILING DATE: 2000-04-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/548,370A
CURRENT FILING DATE: 2000-04-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: THEREFOR
                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US 60/101,594
                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 09/404,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                             TYPE: PRT
ORGANISM: Artificial sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              אבע גט NOS: 71
PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yan, Rigiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney, Mark E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/09548370A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28341/6280D
                                                                                                                                                                                               version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 20; DB 19; 100.0%; Pred. No. 4.2e+06; rative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALZHEIMER'S DISEASE SECRETASE,
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/155,493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09/404,133
Score 20;
Pred. No.
DB 19;
4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APP SUBSTRATES THEREFOR AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APP SUBSTRATES THEREFOR, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USE
```

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Thes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; FEATURE: ; OTHER INFORMATION: Description of Artificial Sequence: Peptide US-09-548-373A-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-548-373D-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-548-373A-66
                                                                                                                              CURRENT APPLICATION NUMBER: US/09/548,373D CURRENT FILING DATE: 200-04-12 PRIOR APPLICATION NUMBER: US 69/155,493 PRIOR FILING DATE: 1999-09-23 PRIOR APPLICATION NUMBER: US 09/404,133 PRIOR FILING DATE: 1999-09-23 PRIOR APPLICATION NUMBER: PCT/US99/20881 PRIOR APPLICATION NUMBER: US 60/101,594 PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 66, Application US/09548373D GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 66, Application US/09548373A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                           SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/PRIOR FILING DATE: 1998-00-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1999-0
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1999-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT FILING DATE: 2000-04-02
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
                                                                                              NUMBER OF SEQ ID NOS: SOFTWARE: Patentin ve
                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, TITLE OF INVENTION: THEREOF FILE REFERENCE: 29915/62808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/548,373A CURRENT FILING DATE: 2000-04-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND TITLE OF INVENTION: THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: GURNEY ET AL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 4
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE:
                    ORGANISM: Artificial sequence
FEATURE:
                                                         ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Heinrikson, Robert L. Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bienkowski, Michael J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gurney, Mark E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rigiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28341/6280B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-09-24
S: 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 20; DB 19;
Pred. No. 4.2e+06;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                             APP SUBSTRATES THEREFOR AND US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

```
RESULT 18
US-09-548-376D-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Description of Artificial Sequence: Peptide US-09-548-376A-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Synthetic peptide US-09-548-373D-66
                                                                                                                                                                                                                                                                                                        Sequence 66, Application US/09548376D GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 66, Applica GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                 FILE REFERENCE: 29915/6280F
CURRENT APPLICATION NUMBER: US/09/548,376D
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                      TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE,
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -09-548-376A-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 71
                                                            PRIOR APPLICATION NUMBER: PCT/US99/20881 PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT FILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/548,376A CURRENT FILING DATE: 2001-01-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Yan, Rigiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE,
TITLE OF INVENTION: THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: 28341/6280F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 4
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Gurney, Mark E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          / Match 100.0%; Score 20; Di
Local Similarity 100.0%; Pred. No. 4:
nes 4; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 NLDA 4
                    APPLICATION NUMBER: US 60/101,594 FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/09548376A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4;
                                                                                                                                                                                                                                                                                 APP SUBSTRATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APP SUBSTRATES THEREFOR, AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Peptide US-09-551-853A-66
                                                                                                                                                                                                                                                        Dр
                                                                                                                                                                                   US-09-551-853D-66
                                                                                                                                                                                                       RESULT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Synthesized US-09-548-376D-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-551-853A-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: P
SEQ ID NO 66
LENGTH: 4
                                                                                                                                                    Sequence 66, Application US/09551853D | GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 66,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn version SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
             FILE REFERENCE: 29915/6280L
CURRENT APPLICATION NUMBER: US/09/551,853D
CURRENT FILING DATE: 2000-04-18
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
                                                                                  TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, TITLE OF INVENTION: THEREOF FILE REFERENCE: 29915/6280L
                                                                                                                                  APPLICANT: GURNEY ET AL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/1 PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION.

FILE REFERENCE: 28341/680L

CURRENT PEPLICATION NUMBER: US/09/551,853A

CURRENT FILING DATE: 2000-04-18

CURRENT FILING DATE: 60/155,493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Yan, Riqiang
TITLE OF INVENTION: ALZHEIMEI
TITLE OF INVENTION: THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1999-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1
NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
PRIOR APPLICATION NUMBER: US 09/404,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                                        1 NLDA
                                                                                                                                                                                                                                                                                       1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09551853A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gurney, Mark E
                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALZHEIMER'S DISEASE SECRETASE,
                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09/404,133
                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                        Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 20; DB 19;
Pred: No. 4.2e+06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    peptide
                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                         DB 19;
                                                                                                                                                                                                                                                                                                                                        .2e+06;
                                                                                                                     APP SUBSTRATES THEREFOR AND USE
                                                                                                                                                                                                                                                                                                                                                      Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4;
                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APP SUBSTRATES THEREFOR, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Description of Artificial Sequence: Peptide US-09-668-314A-76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Synthetic peptide US-09-551-853D-66
                                                                                             US-09-668-314B-76
                                                                                                                  RESULT 22
          Sequence 76, Application US/09668314B
GENERAL INFORMATION:
APPLICANT: Gurney, et al
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND USES
TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                  Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn version 3.1 SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 76, Applica GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE,
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 28341/6280NCD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-668-314A-76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
                                                                                                                                                                                                                                                                                                                       TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
TEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/101,594 PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/169,232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/668,314A
CURRENT FILING DATE: 2000-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Gurney, Mark APPLICANT: Bienkowski,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 4
TYPE: PRT
FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
les 4; Conserv
                                                                                                                                                                   1 NLDA
                                                                                                                                                                                             1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1999-09-23
APPLICATION NUMBER: PCT/US99/20881
FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 09/416,901
                                                                                                                                                                                                                                  4.
                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                     Patentin Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/09668314A
                                                                                                                                                                                                                                100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1999-12-06
                                                                                                                                                                                                                                                                                                                                                                                                                       2.0
                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                . 4.2e+06;
thes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 19;
                                                                                                                                                                                                                                                                  DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 4;
                                                                                                                                                                                                                                                             Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APP SUBSTRATES THEREFOR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USES
```

```
; OTHER INFORMATION: Synthetic peptide US-09-668-314B-76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                     ; OTHER INFORMATION: Description of Artificial Sequence: Peptide
US-09-681-442-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-681-442-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 23
              Query Match
Best Local 9
                                                                                                                                                                          SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 76
 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 66,
                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/681,442
CURRENT FILING DATE: 2001-04-05
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/2088:
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/668,314B
CURRENT FILING DATE: 2002-06-11
PRIOR APPLICATION NUMBER: US 60/169,232
PRIOR FILING DATE: 1999-12-06
                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Gurney, Mark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/155,493 PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 09/416,901 PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                             SOFTWARE: PatentIn
                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 73
                                                                                                                                                                                                                                PRIOR FILING DATE:
                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/101,594
                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: 28341/6280FG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Artificial sequence
                                                                                                      FEATURE:
                                                                                                                   ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NLDA 4
4;
                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/09681442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Heinrikson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bienkowski, Michael J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yan, Riqiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Parodi, Luis A.
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                1998-09-24
                                                                                                                                                                                                                                                                   1999-09-23
                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Robert L.
                                                                                                                                                                                                                                                                                   PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT/US99/20881
 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 20; DE
Pred. No. 4.2
); Mismatches
Score 20; DB 20;
Pred. No. 4.2e+06;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.2e+06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20;
                                  Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
0
```

ğ

1 NLDA 4

Βb

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-794-748-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Yan, Riqia
TITLE OF INVENTION: A
TITLE OF INVENTION: U
TITLE OF INVENTION: T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 66, Application:
                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/794,748
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: Description of Artificial Sequence: -09-794-743-66
                                                                                        PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
                                                                                                                                                                                                                                   TITLE OF INVENTION: ALZHI
TITLE OF INVENTION: USES
TITLE OF INVENTION: THERI
FILE REFERENCE: 28341/628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: 28341/6280BC
CURRENT APPLICATION NUMBER: US/09/794,743
CURRENT FILING DATE: 2001-02-7
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                                       equence 66, Application US/09794748 ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/
PRIOR ETILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NLDA 4
                APPLICATION NUMBER: PCT
FILING DATE: 1999-09-23
APPLICATION NUMBER: 60/
                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/:
FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                               Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09794743
                                                                                                                                                                                                                                                                                                                             Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                         Gurney, Mark E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; llarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                           Rigiang
                                                                                                                                                                                                                                 28341/6280JL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rigiang
1998-09-24
                                                                            1999-09-23
                                                                                                                                                                                                                                                     THEREFOR
                                                                                                                                                                                                                                                                                       ALZHEIMER'S DISEASE SECRETASE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
                  60/101,594
                                                        PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/155,493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09/404,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 20; DB 21;
Pred. No. 4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 4;
                                                                                                                                                                                                                                                                                   APP SUBSTRATES THEREFOR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
В
                                                                                                                                                       RESULT 27
US-09-794-927-66
                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: Description of Artificial Sequence: Peptide US-09-794-925-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Peptide
US-09-794-748-66
                                                                                                                      Sequence 66, Applicat GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: I
SEQ ID NO 66
                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 66, Application US/09794925 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: SEQ ID NO 66
                             TITLE OF INVENTION:
                                                APPLICANT:
                                                               APPLICANT:
                                                                            APPLICANT:
                                                                                           APPLICANT:
                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Yan, Rigiang
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE,
TITLE OF INVENTION: THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 4
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 09/PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/794,925
CURRENT FILING DATE: 2001-02-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH:
                                                                                                                                                                                                                      \mathbf{L}
                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NLDA 4
OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                          Bienkowski, Michael J.
Heinrikson, Robert L.
                                                                                                         Gurney, Mark E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PatentIn Ver.
                                                            Parodi, Luis A.
                                                                                                                                        Application US/09794927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bienkowski, Michael J.
Heinrikson, Robert L.
Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gurney, Mark E.
                                          Rigiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28341/6280НІ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-09-24
                           ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR,
                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09/404,133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                 Pred.
                                                                                                                                                                                                                                                                                                              Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 20; DB 21;
Pred. No. 4.2e+06;
; Mismatches 0;
                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                NO;
                                                                                                                                                                                                                                                                                              4.2e+06;
                                                                                                                                                                                                                                                                                                             Length 4;
                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APP SUBSTRATES THEREFOR, AND
                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

B

ű

```
Query Match
Best Local Similarity
Thes 4; Conserv
              Š
                                                                                                      ; FEATURE:
; OTHER INFORMATION: Description
US-09-795-847-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-795-847-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                   SEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 66,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 66
                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/2
                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/795,847
CURRENT ETLING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                               PRIOR FILING DATE:
                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SURRENT FILING DATE: 09/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: 28341/6280FG
CURRENT APPLICATION NUMBER: US/09/794,927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: PCT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER:
                                                                                                                                                 TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Description of Artificial Sequence: Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/:
FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                  PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bienkowski, Michael J.
Heinrikson, Robert L.
Parodi, Luis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gurney, Mark E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09795847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rigiang
                                                                                                                                                                                                                                                                                                                                                                                                                                   28341/6280DE
                                                                                                                                                                                                                                               1998-09-24
                                                                                                                                                                                                                                                                            1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                     THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73
                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09/416,901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09/404,133
                                                                                                                                                                                                                                                                                                                                                        60/155,493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCT/US99/20881
                                                                                                                                                                                                                                                              60/101,594
                                                                                                                                                                                                                                                                                             PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/101,594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/155,493
                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                           Score 20; DB 21;
Pred. No. 4.2e+06;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 20; DB 21;
Pred. No. 4.2e+06;
                                                                                                                      of Artificial Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                        Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 4;
                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                          0;
```

```
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Peptide
US-09-869-414-66
Query Match
Best Local Similarity
Thes 4; Conserve
                                                                                    ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: synthetic
OTHER INFORMATION: peptide sequence
US-09-908-943A-142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
"hes 4; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-869-414-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-908-943A-142
                                                                                                                                                                                                                                  SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: POSEQ ID NO 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 66, Applica GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 142, Applic GENERAL INFORMATION:
                                                                                                                                                                                                                                                                     APPLICANT: Bienkowski, Mike J.
APPLICANT: Heinrikson, Robert L.
APPLICANT: Heinrikson, Robert L.
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
FILE REFERENCE: 29915/00281A.US1
CURRENT APPLICATION NUMBER: US/09/908,943A
CURRENT FILING DATE: 2001-07-19
PRIOR APPLICATION NUMBER: 60/219,795
PRIOR APPLICATION NUMBER: 60/219,795
PRIOR FILING DATE: 2000-07-19
NUMBER OF SEQ ID NOS: 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/869,414
CURRENT FILING DATE: 2001-06-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILLING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, TITLE OF INVENTION: THEREFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Yan, Riqiang APPLICANT: Tomasselli, Alfredo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/101,594 PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 28341/6280M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Beinkowski et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 4
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                               LENGTH: 4
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gurney, Mark E.
Emmons, Thomas L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/09869414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09908943A
                100.0%; Score 20; ilarity 100.0%; Pred. No. Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCT/US99/20881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                    Mismatches
                                     4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4.2e+06;
                                                           DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APP
                                                       Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBSTRATES THEREFOR, AND
                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

Qy

```
RESULT 32
PCT-US96-19549-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Description of Artificial Sequence: synthetic
; OTHER INFORMATION: peptide sequence
US-60-275-251-142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 31
US-60-275-251-142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                               SOFTWARE: Patentin Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION UMBER: PCT/US96/19549
FILING DATE: herewith
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Heslin, James M.
REGISTRATION NUMBER: 29,541
REFERENCE/DOCKET NUMBER: 015270-002
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2, Application PC/TUS9619549 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 142, Application US/60275251 GENERAL INFORMATION:
                                TELEFAX: 415-326-2422
NFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/60/275,251
CURRENT FILING DATE: 2001-03-12
NUMBER OF SEQ ID NOS: 197
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 4
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Bienkowski, Mike J.
APPLICANT: Heinrikson, Robert L.
TITLE OF INVENTION: SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY
FILE REFERENCE: 29915/00281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Yan, Riqiang APPLICANT: Tomasselli,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Athena Neurosciences, Inc.
TITLE OF INVENTION: Beta-Secretase
NUMBER OF SEQUENCES: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                          CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4;
                                                                                                                                                                                                                                                                                                                                                        94111-3834
                                                                                                                                                                                                                                                                                                                                                                                        California
                                                                                                                                                                                                                                                                                                                                                                                                                     E: Townsend and Townsend and Crew LLP Two Embarcadero Center, 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gurney, Mark E.
Emmons, Thomas L.
amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29915/00281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alfredo G.
                                                                                                                                                                                                                     PCT/US96/19549
                                                                                                       015270-002230PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                        Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

```
US-09-471-669-51
; Sequence 51, Application US/09471669
; GENERAL INFORMATION:
; APPLICANT: Anderson, John P.
                                                                                                                                       밁
                                                                                               RESULT 34
                                                                                                                                                                                                                                                ; MOLECULE TYPE: US-08-485-152-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 33
US-08-485-152-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
"herhes 4; Conserve
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCT-US96-19549-2
                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/08485152 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                          TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 29,541
REFERENCE/DOCKET NUMBER: 01:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/485,152
                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
TOPOLOGY: line
MOLECULE TYPE: |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:

ADDRESSEE: Townsend and Townsend Khourie and Crew STREET: One Market Plaza, Steuart Tower, Suite 2000 CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                        STRANDEDNESS:
TOPOLOGY: Li
                                                                                                                                       2 NLDA
                                                                                                                                                                1 NLDA 4
                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 NLDA 4
                                                                                                                                                                                           4;
                                                                                                                                                                                                                                                                                                  amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                         Heslin, James M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94105
          Basi, Guriqbal
Doane, Minh Tam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          California
                                                                                                                                                                                                                                                                                                                5 amino acids
                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Anderson, John P.
Jacobson-Croak, Kirsten L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sinha, Sukanto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                           peptide
                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           single
                                                                                                                                                                                                     100.0%; score
100.0%; Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Inhibition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Assays for Detecting Beta-Secretase
                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                               015270-002800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 20;
Pred. No.
                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ismatches
                                                                                                                                                                                                     NO;
                                                                                                                                                                                                   4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.2e+06;
hes 0;
                                                                                                                                                                                                                  DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                             Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 5;
                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                    0;
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-471-669-51
                                                                                                                                                                                                                                  ; ORGANISM: Homo sapiens 
US-09-501-708-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; PRIOR FILING DATE: 199
; NUMBER OF SEQ ID NOS:
; SOFTWARE: FASTSEQ for
; SEQ ID NO 51
; LENGTH: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-501-708-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.
Best Local Similarity 100.
Matches 4; Conservative
                                                                                          Query Match
Best Local Similarity
Matches 4; Conserv
                                                                                                                                                                                                                                                                                                                                                               SOFTWARE:
SEQ ID NO 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 51, Application US/09501708 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/501,708
CURRENT FILING DATE: 2000-02-10
PRIOR APPLICATION NUMBER: 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: 60/139,172
PRIOR FILING DATE: 1999-66-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
APPLICANT: McConlogue, Lisa
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
TITLE OF INVENTION: Methods
TITLE OF I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/1
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: 60/1
PRIOR FILING DATE: 1999-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/471,669
CURRENT FILING DATE: 1999-12-24
PRIOR APPLICATION NUMBER: 60/114,408
PRIOR FILING DATE: 1998-12-31
PRIOR FILING DATE: 1998-12-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: Beta-Secretase Enzyme Compositions TITLE OF INVENTION: Methods FILE REFERENCE: 228-US-NEW2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                LENGTH: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 NLDA 4
1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tung, Jay
Wang, Shuwen
McConlogue, Lisa
                                                                                                                                                                                                                                                                                                                                                                                                  FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        John, Varghese
Power, Michael
Sinha, Sukanto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tatsuno, Gwen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Power, Michael
Sinha, Sukanto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Frigon, Normand
John, Varghese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Doane, Minh Tam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Basi, Guriqbal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Anderson, John P.
                                                                                             100.0%;
nilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/139,172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/119,571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                             0;
                                                                                          Score 20; DB 19;
Pred. No. 4.2e+06;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 20; DB 18;
Pred. No. 4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                         Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                             Indels
                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                          0;
```

```
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and TITLE OF INVENTION: Methods FILE REFERENCE: 228-US-NEW2C3 (CURRENT APPLICATION NUMBER: US/09/723,739 (CURRENT FILING DATE: 2001-08-20 (PRIOR APPLICATION NUMBER: US 09/501,708 (PRIOR FILING DATE: 2000-02-10 (PRIOR APPLICATION NUMBER: US/09/501,708 (PRIOR APPLICATION NUMBER: 60/139,172 (PRIOR APPLICATION NUMBER: 60/
APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: Wang, Shuwen
APPLICANT: McConlogue, Lisa
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
TITLE OF INVENTION: Methods
FILE REFERENCE: 228-US-NEW2C2
CURRENT APPLICATION NUMBER: US/09/724,566
CURRENT ETLING DATE: 2001-08-16
PRIOR APPLICATION NUMBER: US 09/501,708
PRIOR APPLICATION NUMBER: 60/119,571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 37
US-09-724-566-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 51, Application US/09724566 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 104
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 51, Application US/09723739 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Anderson, John P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Anderson, John P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Basi, Guriqbal
Doane, Minh Tam
Frigon, Normand
John, Varghese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      McConlogue, Lisa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          John, Varghese
Power, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tung, Jay
Wang, Shuwen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Frigon, Normand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Power, Michael
Sinha, Sukanto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tatsuno, Gwen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tatsuno, Gwen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sinha, Sukanto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Basi, Guriqbal
Doane, Minh Tam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; ilarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

0;

```
APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: Wang, Shuwen
APPLICANT: WConlogue, Lisa
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
TITLE OF INVENTION: Methods
FILE REFERENCE: 228-US-NEW2C5
CURRENT APPLICATION NUMBER: US/09/724,568
CURRENT APPLICATION NUMBER: US 09/501,708
PRIOR APPLICATION NUMBER: US 09/501,708
PRIOR FILING DATE: 2000-02-10
PRIOR FILING DATE: 1999-02-10
PRIOR FILING DATE: 1999-02-10
PRIOR FILING DATE: 1999-02-10
                                                                                                                                                                                                                               Вþ
                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                     US-09-724-569-51
                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Homo sapiens US-09-724-568-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 38
US-09-724-568-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Homo sapiens US-09-724-566-51
                                                                                                                                          Sequence 51, Applica GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 51
LENGTH: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.
Matches 4; Conservative
                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 51, Applica GENERAL INFORMATION:
                                                                                                                           APPLICANT: Anderson, John P.
                             APPLICANT
                                                          APPLICANT:
                                                                      APPLICANT:
                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 104
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: F
                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Anderson, John P. APPLICANT: Basi, Guriqbal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 5
TYPE: PRT
                                                                                                                                                                                                                                            1 NLDA 4
                                                                                                                                                                                                                             2 NLDA 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 NLDA 5
                                                                                                                                                                                                                                                                                  4;
                                                                  Basi, Guriqbal
Doane, Minh Tam
Frigon, Normand
John, Varghese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Doane, Minh Tam
Frigon, Normand
John, Varghese
Power, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FastSEQ
                                         Power, Michael
Sinha, Sukanto
                                                                                                                                                     Application US/09724569
Wang, Shuwen
                           Tatsuno, Gwen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tatsuno, Gwen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sinha, Sukanto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/09724568
                                                                                                                                                                                                                                                                               100.0%;
ilarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 20; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/139,172
                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                           Score 20; DB Z1;
Pred. No. 4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.2e+06;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 21;
                                                                                                                                                                                                                                                                                                       Length 5;
                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
APPLICANT: MCCOnlogue, Lisa
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
TITLE OF INVENTION: Methods
FILE REFERENCE: 228-US-NEW2C4
CURRENT APPLICATION NUMBER: US/09/724,571
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: US 09/501,708
PRIOR APPLICATION NUMBER: 60/119,571
PRIOR FILING DATE: 1909-02-10
PRIOR APPLICATION NUMBER: 60/119,571
PRIOR FILING DATE: 1999-06-15
PRIOR APPLICATION NUMBER: 60/139,172
PRIOR FILING DATE: 1999-06-15
 B
                                 QΥ
                                                                                                                               LENGTH: 5;
TYPE: PRT;
ORGANISM: Homo sapiens
US-09-724-571-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 40
US-09-724-571-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Homo sapiens US-09-724-569-51
                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 104

SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 51

LENGTH: 5
                                                                           Query Match
Best Local Similarity
                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 51
LENGTH: 5
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 51, Application US/09724571 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Anderson, John P. APPLICANT: Basi, Guriqbal
                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILE REFERENCE: 228-US NEW2C6
CURRENT APPLICATION NUMBER: US/09/724,569
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: US 09/501,708
PRIOR FILING DATE: 2000-02-10
PRIOR FILING DATE: 2000-02-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: 60/139,172
PRIOR FILING DATE: 1999-06-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: Beta-Secretase TITLE OF INVENTION: Methods FILE REFERENCE: 228-US-NEW2C6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
2 NLDA 5
                             1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 NLDA 5
                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Frigon, Normand
John, Varghese
Power, Michael
Sinha, Sukanto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                Tung, Jay
Wang, Shuwen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tatsuno, Gwen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Basi, Guriqbal
Doane, Minh Tam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            McConlogue, Lisa
                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                       100.0%; Score
100.0%; Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 20; 100.0%; Pred. No.
                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Enzyme Compositions
                                                                           No.
                                                                           4.2e+06;
                                                                                            DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 21;
                                                                                         Length 5;
                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                        0;
```

0

RESULT 41

```
CURRENT APPLICATION NUMBER: PCT/US02/15590
CURRENT FILING DATE: 2002-05-17
PRIOR APPLICATION NUMBER: 60/292,591
PRIOR FILING DATE: 2001-05-22
PRIOR APPLICATION NUMBER: 60/316,115
PRIOR FILING DATE: 2001-08-30
NUMBER OF SEQ ID NOS: 264
SOFTMARE: FastSEQ for Windows Version 4.0
SEQ ID NO 257
                                                                                             RESULT 43
US-09-668-314A-71
Sequence 71. Application US/09668314A
GENERAL INFORMATION:
                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 42
US-09-277-229-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: Description of Artificial Sequence: Synthetic ; OTHER INFORMATION: peptide US-09-277-229-17
                                                                                                                                                                                                              뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Beta-Secretase Cleavage Site PCT-US02-15590-257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCT-US02-15590-257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 17, Application US/09277229
GENERAL INFORMATION:
APPLICANT: Citron, Martin
APPLICANT: Vassar, Robert J.
APPLICANT: Bennett, Brian D.
TITLE OF INVENTION: Beta Secretase Genes and Polypeptides
FILE REFERENCE: A-581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 17
                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/277,229
CURRENT FILING DATE: 1999-03-26
NUMBER OF SEQ ID NOS: 26
                APPLICANT: Gurney, Mark
APPLICANT: Bienkowski, Michael J.
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE,
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 28341/6280NCP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: BETA-SECRETASE SUBSTRATES
TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: 8
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENGTH:
                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
les 4; Conserv
                                                                                                                                                                                                                           1 NLDA 4
                                                                                                                                                                                                             3 NLDA 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application PC/TUS0215590
                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
NUMBER: US/09/668,314A
                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 20; DB 1;
Pred. No. 4.2e+06;
Mismatches 0;
                                                                                                                                                                                                                                                                                               Score 20;
Pred. No.
                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                DB
                                                                                                                                                                                                                                                                                               2e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 8;
                                                  APP SUBSTRATES THEREFOR,
                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                  AND USES
```

```
밁
                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ş
                                                                                                                                             ; OTHER INFORMATION: Synthetic peptide US-09-668-314B-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-668-314A-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-668-314B-71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 71, Applica GENERAL INFORMATION: APPLICANT: Gurney,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Loc
Matches
                                                                                                                                                                                                                                                       SEQ ID NO 71
                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: P
SEQ ID NO 71
                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: 28341/6280NCP
CURRENT APPLICATION NUMBER: US/09/668,314B
CURRENT FILING DATE: 2002-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1999-12-06
PRIOR APPLICATION NUMBER: US 09/416,901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 60/169,232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1999-12-06
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT FILING DATE: 2000-09-22 PRIOR APPLICATION NUMBER: 60/169,232
                                                                                                                                                                             LENGTH: 8
TYPE: PRT
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 83
                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 8
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Description of Artificial Sequence: Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 NLDA 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 NLDA 4
3 NLDA 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/
FILING DATE: 1999-09-23
                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US 60/101,594
                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gurney, et al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09668314B
                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                        version
                                                                                                                                                                                                                                                                                                        1998-09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                     100.0%; Score 20; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/155,493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 20; DB 20;
Pred. No. 4.2e+06;
                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                      .2e+06;
                                                                                                      Length 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APP SUBSTRATES THEREFOR, AND US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 8;
                                                                     Indels
                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
RESQUIT 45
US-09-471-669-52
Sequence 52. Application US/09471669
Sequence 52. Application US/09471669
Sequence 52. Application US/09471669
SEMERAL IMFORMATION: John P.
APPLICANT: Advanced Applicant: ```

```
Result
 Title:
Perfect score:
 Database
 Post-processing:
 Minimum
 Total number of hits satisfying chosen parameters:
 Scoring table:
 Sequence:
 Run on:
 OM protein -
 ö
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 DB
DB
 Score
 seq
 protein search, using sw model
 length:
 Pending_Patents_AA_New:*

1: /cgn2_6/ptodata/2/paa/P

2: /cgn2_6/ptodata/2/paa/U

3: /cgn2_6/ptodata/2/paa/U

4: /cgn2_6/ptodata/2/paa/U

5: /cgn2_6/ptodata/2/paa/U

6: /cgn2_6/ptodata/2/paa/U

7: /cgn2_6/ptodata/2/paa/U
 Query
Match
 100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
 405691 seqs,
 BLOSUM62
Gapop 10.0 ,
 20
 February
 Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries
 1 nlda 4
 PAT943-6
 GenCore version 5.1.3
Copyright (c) 1993 - 2003 Compugen
 /cgn2_6/ptodata/2/paa/PCT_NEW_COMB.pep:*
/cgn2_6/ptodata/2/paa/US06_NEW_COMB.pep:*
/cgn2_6/ptodata/2/paa/US08_NEW_COMB.pep:*
/cgn2_6/ptodata/2/paa/US09_NEW_COMB.pep:*
/cgn2_6/ptodata/2/paa/US09_NEW_COMB.pep:*
/cgn2_6/ptodata/2/paa/US10_NEW_COMB.pep:*
/cgn2_6/ptodata/2/paa/US10_NEW_COMB.pep:*
 Length
 2000000000
 6
 BG
 81078759 residues
 Gapext 0.5
 2003, 11:19:49;
 US-09-668-314C-76
US-09-794-927A-66
US-09-949-927A-66
US-09-869-414A-66
US-09-548-366F-66
US-09-668-314C-71
PCT-US02-31846-1
US-09-668-314C-71
PCT-US02-31846-1
US-09-668-314C-65
US-09-724-566A-83
US-09-724-566A-83
US-09-724-566A-83
US-09-724-566A-83
US-09-724-925A-63
 SUMMARIES
 (without alignments)
23.165 Million cell updates/sec
 Search time 14 Seconds
 845
 Sequence 66, Appl
Sequence 51, Appl
Sequence 51, Appl
Sequence 51, Appl
Sequence 8, Appl
Sequence 8, Appl
Sequence 52, Appl
Sequence 83, Appl
Sequence 83, Appl
Sequence 84, Appl
Sequence 63, Appl
Sequence 61, Appl
Sequence 61, Appl
Sequence 1, Appl
 Sequence
Sequence
Sequence
 Description
 Sequence
Sequence
 75,000,000
 Appl
Appl
Appl
Appl
Appl
Appl
Appl
 밁
 ρy
 ; FEATURE:
; OTHER INFORMATION:
US-09-668-314C-76
 Query Match
Best Local S
Matches 4
 1 NLDA 4
 H
 NLDA 4
```

| RESULT 1  US-09-668-314C-76  Sequence 76, Applica GENERAL INFORMATION: APPLICANT: Gurney, APPLICANT: Gurney, TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INVENTION: CURRENT APPLICATION CURRENT FILING DATE: PRIOR FILING DATE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            | 45                  | 44                   | 4 4                 | ა <b>.</b>       | 40               | 39              | 38              | 37                | 36                | 35               | 34                | ယ္                | 32                | 31                | 30                | 29                | 28              | 27              |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------|----------------------|---------------------|------------------|------------------|-----------------|-----------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|--|
| 314C<br>76,<br>76,<br>TINT: OF TINT: OF |            | 20                  | 20                   | 200                 | ٥ د<br>د د       | 2 6              | 20              | 20              | 20                | 20                | 20               | 20                | 20                | 20                | 20                | 20                | 20                | 20              | 20              |  |
| SULT 1  -09-668-314C-76  -09-668-314C-76  Sequence 76, Application US/09668314C  GENERAL INFORMATION: APPLICANT: GUINEY, et al  TITLE OF INVENTION: ALZHEIMER'S DISE  TITLE OF INVENTION: THEREOF  FILE REFERENCE: 28341/6280NCP  CURRENT APPLICATION NUMBER: US/09/66  CURRENT FILING DATE: 2000-09-22  PRIOR APPLICATION UNMEER: US 60/169,  PRIOR FILING DATE: 1999-12-06                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |                     |                      |                     | 100.0            | 100.0            | •               |                 | •                 | •                 | •                | •                 | •                 | 100.0             | 100.0             | 100.0             | 100.0             | 100.0           | 100.0           |  |
| et al<br>ALZHEIMER'<br>THEREOF'<br>1/6280NCP<br>NUMBER: US<br>100MBER: US<br>100MBER: US<br>100MBER: US<br>100MBER: US                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            | 62                  | 5 2                  | ر<br>د ب            | ب<br>د<br>د      | 2 L              | ω               | 33              | 33                | 33                | <b>ω</b>         | 32                | 32                | 32                | 32                | 32                | 32                | 30              | 30              |  |
| NCF<br>OS<br>OF<br>OS<br>OF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            | Q I                 | , ب                  | лс                  | א כ              | ח ע⊢             | 9               | σ               | ഗ                 | رب<br>ر           | _                | თ                 | σ                 | σ                 | σ                 | σ                 | σ                 | 6               | 6               |  |
| ULT 1 09-668-314C-76 09-668-314C-76 09-668-314C-76 equence 76, Application US/09668314C ENERAL INFORMATION: APPLICANT: Gurney, et al TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, TITLE OF INVENTION: THEREOF FILE REFERENCE: 28341/5280NCP CURRENT APPLICATION NUMBER: US/09/668,314C CURRENT FILING DATE: 2000-09-22 PRIOR APPLICATION NUMBER: US 60/169,232 PRIOR FILING DATE: 1999-12-06                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ALIGNMENTS | US-10-057-498-14180 | PCT-US02-32727-14180 | US-09-513-999C-5901 | IIS-10-160-777-4 | PCT-USU2-31845-4 | us-10-160-777-6 | US-10-264-707-6 | US-09-471-669A-63 | US-09-724-566A-63 | PCT-US02-31846-6 | US-10-174-410-214 | US-10-174-410-211 | US-10-174-410-198 | US-10-174-410-191 | US-10-174-410-180 | US-10-174-410-177 | US-10-160-777-9 | US-10-264-707-9 |  |
| APP SUBSTRATES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            | Sequence            | Seguence             |                     |                  |                  | Sequence        | Sequence        |                   |                   | Sequence         | Sequence          | Sequence          | Sequence          | Sequence          | Sequence          | Sequence          | Sequence        | Sequence        |  |
| THEREFOR,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                     | 14180 A              | 5901 AD             | 4, Appli         | 4, Appli         |                 | 6, Appli        |                   |                   | ≥ .              | •                 | -                 | 198, App          |                   |                   | 177, App          |                 | 9, Appli        |  |
| AND U                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |            |                     |                      |                     |                  |                  |                 |                 |                   |                   |                  |                   |                   |                   |                   |                   |                   |                 |                 |  |

```
FILE REFERENCE: 28341/6280MCP
CURRENT APPLICATION NUMBER: US/09/668,314C
CURRENT PAPELICATION NUMBER: US/09/668,314C
CURRENT PAPELICATION NUMBER: US 60/169,232
PRIOR APPLICATION NUMBER: US 60/169,232
PRIOR APPLICATION NUMBER: US 59/416,901
PRIOR APPLICATION NUMBER: US 59/416,901
PRIOR APPLICATION NUMBER: US 59/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-24
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1998-09-24
PRIOR FILING DATE: 1999-09-23
PRIOR
```

```
RESULT 4
US-09-869-414A-66
; Sequence 66, Apr
 밁
 ρV
 ; OTHER INFORMATION: Synthetic peptide US-09-794-927A-66
 CURRENT APPLICATION NUMBER: US/09/794,927A
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR TILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
 밁
 Ş
 ; OTHER INFORMATION: Synthetic peptide US-09-794-925A-66
 Query Match
 Matches
 PRIOR APPLICATION NUMBER: 60/15
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/40
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/U
PRIOR FILING DATE: 1999-09-23
 SOFTWARE: Pa
 Sequence 66, Applica GENERAL INFORMATION:
 Query Match
Best Local
 Matches
 PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
 APPLICANT: Gurney et al.
TITLE OF INVENTION: Alzheimer's Disease Secretase,
TITLE OF INVENTION: Therefor
FILE REFERENCE: 29915/6280FG
 09-794-927A-66
 ORGANISM: Artificial sequence FEATURE:
 LENGTH: 4
TYPE: PRT
 SOFTWARE: Pa
 PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
 PRIOR APPLICATION NUMBER: 09/416,901 PRIOR FILING DATE: 1999-10-13
 CURRENT APPLICATION NUMBER: US/09/794,925A CURRENT FILING DATE: 2001-02-27
 ORGANISM: Artificial sequence
 FEATURE:
 TYPE: PRT
 Local Similarity
 1 NLDA 4
 1 NLDA 4
 Local Similarity es 4; Conserv
 _
 1 NLDA 4
 PatentIn Ver. 2.0
 PatentIn Ver.
 Application US/09869414A
 Application US/09794927A
 Conservative
 Conservative
 100.0%;
 100.0%;
 09/404,133
 60/101,594
 PCT/US99/20881
 60/155,493
 0;
 0,
 Score 20; DB 5;
Pred. No. 3.3e+05;
 Score 20; DB 5;
Pred. No. 3.3e+05;
 Mismatches
 Mismatches
 Length 4;
 Length 4;
 APP Substrates Therefor and Uses
 0,
 0;
 Gaps
 Gaps
 0;
 0;
```

```
밁
 Qy
 ; OTHER INFORMATION: Synthetic peptide US-09-548-366F-66
 밁
 ρ
 US-09-548-366F-66
 ; OTHER INFORMATION: Description of Artificial Sequence: Synthetic Peptide US-09-869-414A-66
 PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/2081
PRIOR FILING DATE: 1999-09-23
PRIOR FILING DATE: 1999-09-23
 Matches
 Query Match
 SEQ ID NO 66
LENGTH: 4
 Sequence 66, Application GENERAL INFORMATION: APPLICANT: GURNEY ET AL.
 Matches
 Query Match
Best Local
 PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
 SEQ ID NO 66
 CURRENT APPLICATION NUMBER: US/09/548,366F
CURRENT FILING DATE: 2000-04-12
PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
 TITLE OF INVENTION: ALZHEIMER'S DISEÁSE SECRETASE,
TITLE OF INVENTION: THEREOF |
FILE REFERENCE: 29915/6280J
 SOFTWARE:
 PRIOR APPLICATION NUMBER: US 09/404, 133 PRIOR FILING DATE: 1999-09-23
 GENERAL INFORMATION:
APPLICANT: Gurney e
 TYPE: PRT ORGANISM: Artificial sequence
 PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 74
 APPLICANT: Gurney et al.
TITLE OF INVENTION: ALCHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND
TITLE OF INVENTION: THEREFOR |
FILE REFERENCE: 23341/6580M
CURRENT APPLICATION NUMBER: US/09/869,414A
CURRENT FILING DATE: 2001-06-27
 FEATURE:
 SOFTWARE:
 ORGANISM: Artificial Sequence
 FEATURE:
 Local Similarity
 Local Similarity
 1 NLDA 4
 1 NLDA
 1 NLDA 4
NLDA
 PatentIn version 3.1
 4
 PatentIn
 Application US/09548366F
 100.0%; ilarity 100.0%; Conservative 0
 Conservative
 100.0%;
 2.0
 60/101,594
 PCT/US99/20881
 0,
 0;
 Score 20; DB 5;
Pred. No. 3.3e+05
); Mismatches 0
 Score 20; DB 5;
Pred, No. 3.3e+05;
 Mismatches
 0;
 Length 4;
 Length 4;
 APP SUBSTRATES THEREFOR AND
 Indels
 Indels
 0;
 0
 Gaps
 Gaps
 0;
 0;
 USE
```

US-09-724-566A-51

```
; TYPE: PRT ; ORGANISM: Homo sapiens US-09-724-566A-51
 RESULT 7
US-09-471-669A-51
 밁
 Query Match
Best Local Similarity
"Atches 4; Conserva
 APPLICANT: Anderson, John P.
APPLICANT: Basi, Guriqbal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, Normand
APPLICANT: John, Varghese
APPLICANT: Power, Michael
 Sequence 51, Application US/09471669A GENERAL INFORMATION:
 Sequence 51, Application US/09724566A GENERAL INFORMATION:
 SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 51
 PRIOR FILING DATE: 1998-12-31
PRIOR APPLICATION NUMBER: US 60/119,571
PRIOR FILING DATE: 1999-02-10
 CURRENT APPLICATION NUMBER: US/09/471,669A
CURRENT FILING DATE: 1999-12-24
PRIOR APPLICATION NUMBER: US 60/114,408
 CURRENT APPLICATION NUMBER: US/09/724,566A CURRENT FILING DATE: 2000-11-28 PRIOR APPLICATION NUMBER: US 09/501,708 PRIOR FILING DATE: 2000-02-10
PRIOR APPLICATION NUMBER: US 60/139,172 PRIOR FILING DATE: 1999-06-15
 APPLICANT: McConlogue, Lisa
APPLICANT: Elan Pharmaceuticals, Inc.
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
FILE REFERENCE: 015270-006430US
 PRIOR APPLICATION NUMBER: 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: 60/139,172
PRIOR FILING DATE: 1999-66-15
 TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and TITLE OF INVENTION: Methods FILE REFERENCE: 228-US-NEWC2
 APPLICANT:
 APPLICANT:
 APPLICANT:
 NUMBER OF SEQ ID NOS: 104
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT: Anderson, John P.
APPLICANT: Basi, Guriqbal
 APPLICANT:
 APPLICANT:
 APPLICANT:
 LENGTH:
 2 NLDA 5
 1 NLDA 4
 Basi, Guriqbal
Doane, Minh Tam
Frigon, Normand
 Tung, Jay
Wang, Shuwen
McConlogue, Lisa
 John, Varghese
Power, Michael
 Tung, Jay
Wang, Shuwen
 Power, Michael
Sinha, Sukanto
 Sinha, Sukanto
Tatsuno, Gwen
 Tatsuno, Gwen
 Conservative
 100.0%;
 0
 Score 20; I
Pred. No. 3
 Mismatches
 .3e+05;
 Length 5;
 Indels
 0;
 Gaps
 0;
```

```
RESULT 9
PCT-US02-31846-8
 밁
 ; FEATURE:
; OTHER INFORMATION: Synthetic peptide
US-09-668-314C-71
 밁
 Ş
 US-09-471-669A-51
 US-09-668-314C-71 ; Sequence 71, Application US/09668314C
 Sequence 8, Application PC/TUS0231846
GENERAL INFORMATION:
APPLICANT: Fisher, Jed F.
 NUMBER OF SEQ ID NOS: 84
SOFTWARE: PatentIn version 3.1
SEQ ID NO 71
 Query Match 100.
Best Local Similarity 100.
Matches 4; Conservative
 GENERAL INFORMATION:
 Hest Local Similarity 100.0%; Matches 4; Conservative
 SOFTWARE: PatentIn version 3.1 SEQ ID NO 8
 APPLICANT: Gurney, et al TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, TITLE OF INVENTION: THEREOF FILE REFERENCE: 28341/6280NCP CURRENT APPLICATION NUMBER: US/09/668,314C CURRENT FILING DATE: 2000-09-22
 PRIOR APPLICATION NUMBER: 60/327,149
PRIOR FILING DATE: 2001-10-04
PRIOR APPLICATION NUMBER: 60/334,058
PRIOR FILING DATE: 2001-11-28
 CURRENT APPLICATION NUMBER: PCT/US02/31846 CURRENT FILING DATE: 2002-11-19
 APPLICANT: Jacobs, Jon S.
APPLICANT: Scherer, Brian S.
TITLE OF INVENTION: Hydroxypropylamines
FILE REFERENCE: 01-1555-C
 PRIOR APPLICATION NUMBER: US 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
 PRIOR APPLICATION NUMBER: US 60/169,232
PRIOR FILING DATE: 1999-12-06
PRIOR APPLICATION NUMBER: US 09/416,901
PRIOR FILING DATE: 1999-10-13
 NUMBER OF SEQ ID NOS: 9
 PRIOR APPLICATION NUMBER: US 60/101,594 PRIOR FILING DATE: 1998-09-24
EQ ID NO 8
LENGTH: 9
 TYPE: PRT ORGANISM: Artificial sequence
 ORGANISM: Homo sapiens
 LENGTH:
 1 NLDA 4
 1 NLDA 4
 3 NLDA 6
 100.0%;
 0,
 0;
 Score 20; DB 5;
Pred. No. 3.3e+05;
); Mismatches 0;
 Score 20; DB 5;
Pred. No. 3.3e+05;
 Mismatches
 Length 5;
 Length 8;
 APP SUBSTRATES THEREFOR, AND
 Indels
 Indels
 0;
 0;
 Gaps
 0
 0
```

ŭ

```
RESULT 11
US-09-724-566A-83
 Бр
 Ş
 US-09-724-566A-52
 g
 QУ
 Query Match
Best Local Similarity
"---hes 4; Conserv?
 US-09-724-566A-52
 PCT-US02-31846-8
 Sequence 83, Application US/09724566A GENERAL INFORMATION:
 PRIOR APPLICATION NUMBER: 60/139,172
PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 104
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 52
 Matches
 Query Match
 APPLICANT: Anderson, John p. APPLICANT: Basi, Guriqbal APPLICANT: Doane, Minh Tam APPLICANT: Frigon, Normand APPLICANT: John, Varghese
 CURRENT APPLICATION NUMBER: US/09/724,56A CURRENT FILING DATE: 2000-11-28 PRIOR APPLICATION NUMBER: US 09/501,708 PRIOR ETLING DATE: 2000-02-10 PRIOR APPLICATION NUMBER: 60/119,571 PRIOR APPLICATION NUMBER: 60/119,571 PRIOR FILING DATE: 1999-02-10
 GENERAL INFORMATION:
 Sequence
 APPLICANT: Tung, Jay
APPLICANT: Wang, Shuwen
APPLICANT: Wang, Shuwen
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
TITLE OF INVENTION: Methods
TITLE REFERENCE: 228-US-NEWC2
 APPLICANT:
 APPLICANT:
 APPLICANT: Anderson, John P.
 OTHER INFORMATION: Synthetic oligopeptide substrate
 ORGANISM: Artificial Sequence
 APPLICANT:
 APPLICANT:
 APPLICANT:
 TYPE: PRT
 FEATURE:
 NAME/KEY: MISC_FEATURE
LOCATION: (1)..(1)
OTHER INFORMATION: N-terminal biotin
 TYPE: PRT ORGANISM: Artificial Sequence
 FEATURE:
 OTHER INFORMATION: synthetic peptide
 FEATURE:
 Local Similarity es 4; Conserv
 1 NLDA 4
 4 NLDA
 4 NLDA 7
 1 NLDA 4
 Basi, Guriqbal
Doane, Minh Tam
Frigon, Normand
John, Varghese
 Application US/09724566A
 Tatsuno,
 Power, Michael
Sinha, Sukanto
 100.0%;
ilarity 100.0%;
Conservative (
 Conservative
Varghese
 Gwen
 100.0%;
 0;
 0,
 Score 20; DB 5;
Pred. No. 3.3e+05;
 Score 20; DB Pred. No. 3.3 0; Mismatches
 Mismatches
 3.3e+05;
hes 0;
 DB 1;
 Length 9;
 Length 9;
 Indels
 0;
 0;
 Gaps
 Gaps
 0,
 0;
```

```
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic; OTHER INFORMATION: oligopeptide substrate US-09-471-669A-52
 밁
 Query Match
Best Local Similarity
"hehes 4; Conserve
 RESULT 12
US-09-471-669A-52
 OTHER INFORMATION: APP fragment P5-P4'wt US-09-724-566A-83
 CURRENT APPLICATION NUMBER: US/09/724,566A
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: US 09/501,708
PRIOR FILING DATE: 2000-02-10
PRIOR FILING DATE: 2000-02-10
PRIOR APPLICATION NUMBER: 60/119,571
PRIOR APPLICATION NUMBER: 60/119,172
PRIOR APPLICATION NUMBER: 60/139,172
PRIOR APPLICATION NUMBER: 60/139,172
PRIOR FILING DATE: 1999-06-15
 SEQ ID NO 52
 Sequence 52, Application US/09471669A GENERAL INFORMATION:
 SEQ ID NO 83
 PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: US 60/139,172
PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 108
SOFTWARE: Patentin Ver. 2.1
 CURRENT APPLICATION NUMBER: US/09/471,669A CURRENT FILING DATE: 1999-12-24 PRIOR APPLICATION NUMBER: US 60/114,408 PRIOR FILING DATE: 1998-12-31 PRIOR APPLICATION NUMBER: US 60/119,571 PRIOR FILING DATE: 1999-02-10
 APPLICANT: Elan Pharmaceuticals, Inc.
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
FILE REFERENCE: 015270-006430US
 APPLICANT:
 LENGTH: 9
TYPE: PRT
ORGANISM: Artificial Sequence
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT: Anderson, John P.
 NUMBER OF SEQ ID NOS: 104
SOFTWARE: FastSEQ for Windows Version
 APPLICANT:
 APPLICANT:
APPLICANT:
APPLICANT:
 FEATURE:
 TITLE OF INVENTION: Beta-Secretase Enzyme Compositions
TITLE OF INVENTION: Methods
FILE REFERENCE: 228-US-MEWC2
 TYPE: PRT
ORGANISM: Homo sapiens
 APPLICANT:
 FEATURE:
 LENGTH:
 1 NLDA 4
 4 NLDA
 McConlogue, Lisa
Elan Pharmaceuticals,
 Tung, Jay
Wang, Shuwen
 Basi, Guriqbal
Doane, Minh Tam
Frigon, Normand
 Tatsuno, Gwen
 Power, Michael
Sinha, Sukanto
 John, Varghese
 McConlogue, Lisa
 Tung, Jay
Wang, Shuwen
 Power, Michael
Sinha, Sukanto
 Tatsuno, Gwen
 Conservative
 100.0%;
 0;
 Score 20; DB 5;
Pred. No. 3.3e+05;
 Mismatches
 4.0
 Length 9;
 Indels
 0;
 Gaps
```

0;

```
RESULT 13
US-09-471-669A-83
 밁
 В
 ; OTHER INFORMATION: APP fragment P5-P4' wt US-09-471-669A-83
SOFTWARE:
 Sequence 8, Application US/10264707 GENERAL INFORMATION:
APPLICANT: Fisher, Jed F.
APPLICANT: Jacobs, Jon S.
APPLICANT: Scherer, Brian S.
 APPLICANT: Anderson, John P.
APPLICANT: Basi, Guriqbal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, Normand
APPLICANT: John, Varghese
APPLICANT: Power, Michael
APPLICANT: Sinha, Sukanto
 Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 4; Conservative 0
 SEQ ID NO 83
 Sequence 83, Application US/09471669A GENERAL INFORMATION:
 Query Match
Best Local Similarity
 Matches
 APPLICANT: Jacobs, Jon S.
APPLICANT: Scherer, Brian S.
TITLE OF INVENTION: Hydroxypropylamines
FILE REFERENCE: 01-1555-B
CURRENT APPLICATION NUMBER: US/10/264,707
CURRENT FILING DATE: 2002-10-04
 PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: US 6
PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 108
SOFTWARE: Patentin Ver. 2.1
 PRIOR APPLICATION NUMBER: 60/327,149
PRIOR FILING DATE: 2001-10-04
PRIOR APPLICATION NUMBER: 60/334,058
PRIOR FILING DATE: 2001-11-28
NUMBER OF SEQ ID NOS: 9
 TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS FILE REFERENCE: 015270-006430US CURRENT APPLICATION NUMBER: US 00/4/1,669A CURRENT FILING DATE: 1999-12-24 PRIOR APPLICATION NUMBER: US 60/114,408 PRIOR FILING DATE: 1998-12-31 PRIOR APPLICATION NUMBER: US 60/119,571 PRIOR APPLICATION NUMBER: US 60/119,571
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
 FEATURE:
 TYPE: PRT
ORGANISM: Homo sapiens
 APPLICANT:
 LENGTH:
 1 NLDA 4
 4 NLDA
 4 NLDA 7
 1 NLDA 4
 4;
 PatentIn version 3.1
 McConlogue, Lisa
Elan Pharmaceuticals,
 Tatsuno, Gwen
 Conservative
 Shuwen
 100.0%;
 us 60/139,172
 0;
 Score 20; DB 5;
Pred. No. 3.3e+05;
 Score 20; DB 5;
Pred. No. 3.3e+05;
 Mismatches
 Mismatches
 Length 9;
 Length 9;
 Indels
 Indels
 0;
 0
 Gaps
 Gaps
 0;
 0
```

```
OTHER INFORMATION: N-terminal biotin US-10-160-777-8
 밁
 RESULT 15
US-10-160-777-8
 ; LOCATION: (1)..(1); OTHER INFORMATION: N-terminal biotin US-10-264-707-8
 RESULT 16
US-09-668-314C-63
 CURRENT APPLICATION NUMBER: US/10/160,777
CURRENT FILING DATE: 2002-10-15
PRIOR APPLICATION UNMBER: 60/343,772
PRIOR FILING DATE: 2001-12-28
PRIOR FILING DATE: 2001-12-28
PRIOR APPLICATION NUMBER: 60/332,639
PRIOR FILING DATE: 2001-11-19
PRIOR APPLICATION NUMBER: 60/295,332
PRIOR APPLICATION NUMBER: 60/295,332
PRIOR FILING DATE: 2001-06-01
NUMBER OF SEQ ID NOS: 9
SOFTWARE: Patentin version 3.1
Sequence 63, Application US/09668314C
GENERAL INFORMATION:
APPLICANT: Gurney, et al
TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND US
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 28341/6280MCP
CURRENT APPLICATION NUMBER: US/09/668,314C
CURRENT FILING DATE: 2000-09-22
PRIOR APPLICATION NUMBER: US 60/169,232
 Query Match
Best Local S
Matches 4
 Query Match
Best Local Similarity
Matches 4; Conserv
 SEQ ID NO 8
 GENERAL INFORMATION:
 Sequence 8,
 APPLICANT: Freskos, John
APPLICANT: Brown, David L.
APPLICANT: Fobian, Yvette
 TITLE OF INVENTION: Hydroxy Alkyl Amines FILE REFERENCE: 01-1632-C
 APPLICANT:
 FEATURE:
FEATURE:
FEATURE:
 NAME/KEY: MISC_FEATURE LOCATION: (1)..(1)
 OTHER INFORMATION: synthetic peptide
 ORGANISM: Artificial sequence
 TYPE: PRT
 NAME/KEY: MISC_FEATURE
 FEATURE:
 FEATURE:
 ORGANISM: Artificial Sequence
 TYPE: PRT
 ENGTH:
 Local Similarity es 4; Conserv
 4 NLDA
 1 NLDA 4
 1 NLDA 4
 Application US/10160777
 Varghese, John
 Fobian, Yvette M.
 Romero, Arthur G.
 Fang, Larry
 Conservative
 Conservative
 100.0%;
 100.0%;
 0,
 0
 Score 20; DB 6;
Pred. No. 3.3e+05;
 Score 20; DB 6;
Pred. No. 3.3e+05;
 Mismatches
 Length 9;
 Length 9
 Indels
 0;
 0
 Gaps
 Gaps
 0
 0
```

```
RESULT 18
US-09-794-927A-63
; Sequence 63, Application US/09794927A
; GENERAL INFORMATION:
 밁
 Ş
 Qy
 ; OTHER INFORMATION: Synthetic peptide US-09-794-925A-63
 뮹
 ; OTHER INFORMATION: Synthetic peptide US-09-668-314C-63
 Query Match
Best Local
 SEQ ID NO 63
 GENERAL INFORMATION:
APPLICANT: Gurney et al
 Matches
 Query Match
Best Local Similarity
 SOFTWARE: Pa
 Matches
 Sequence 63, Application US/09794925A
 CURRENT APPLICATION NUMBER: US/09/794,925A CURRENT FILING DATE: 2001-02-27 PRIOR APPLICATION NUMBER: 09/416,901 PRIOR FILING DATE: 1999-10-13
 09-794-925A-63
 PRIOR APPLICATION NUMBER: US 09/404,133
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
 PRIOR FILING DATE: 1999-09-23
PRIOR PELICATION NUMBER: 09/4
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: PCT
 TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Uses TITLE OF INVENTION: Therefor
 PRIOR APPLICATION NUMBER: US 6 PRIOR FILING DATE: 1999-09-23
 NUMBER OF SEQ ID NOS:
 PRIOR FILING DATE:
 PRIOR APPLICATION NUMBER:
 PRIOR APPLICATION NUMBER: 60/155,493
 FILE REFERENCE:
 NUMBER OF SEQ ID NOS: 84
 TYPE: PRT
ORGANISM: Artificial sequence
 ORGANISM: Artificial sequence
 TYPE: PRT
 FEATURE:
 ENGTH:
 4 NLDA
 1 NLDA 4
 1 NLDA 4
 FILING DATE: 1999-09-23
 FILING DATE: 1999-12-06
 FILING DATE: 1999-10-13
 APPLICATION NUMBER:
 10
 Similarity 4; Conserv
 PatentIn Ver.
 4.
 PatentIn version 3.1
 100.0%;
ilarity 100.0%;
Conservative (
 100.0%; ilarity 100.0%; Conservative (
 29915/6280ні
 1998-09-24
 PCT/US99/20881
 09/404,133
 60/101,594
 US 60/155,493
 US 09/416,901
 0
 0;
 Score 20;
Pred. No.
 Score 20;
Pred. No.
 Mismatches
 25;
 DB 5; Length 10
 DB
 5; Length 10;
 0;
 Indels
 Indels
 0
 0;
 Gaps
 Gaps
 0;
 0
```

```
Ş
 ; OTHER INFORMATION: Description of Artificial Sequence: Synthetic Peptide US-09-869-414A-63
 В
 RESULT 19
 ; OTHER INFORMATION: Synthetic peptide US-09-794-927A-63
 US-09-869-414A-63
 CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: 09/416,901
PRIOR FILING DATE: 1999-10-13
PRIOR APPLICATION NUMBER: 60/155,493
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 09/404,133
PRIOR FILING DATE: 1999-09-23
 Best Loc
Matches
 Sequence 63, Application US/09869414A GENERAL INFORMATION:
 Query Match
 SEQ ID NO 63
 SEQ ID NO 63
 Matches
 Query Match
 PRIOR APPLICATION NUMBER: 60/155,493 | PRIOR FILING DATE: 1999-09-23 | PRIOR APPLICATION NUMBER: 09/404,133 | PRIOR FILING DATE: 1999-09-23
 CURRENT FILING DATE: 2001-06-27 PRIOR APPLICATION NUMBER: 09/416,901 PRIOR FILING DATE: 1999-10-13
 TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR, AND US TITLE OF INVENTION: THEREFOR | FILE REFERENCE: 28341/6280M
 NUMBER OF SEQ ID NOS: 74
 PRIOR APPLICATION NUMBER: PCT/US99/20881
 CURRENT APPLICATION NUMBER: US/09/869,414A
 NUMBER OF SEQ ID NOS:
 PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: 60/101,594
PRIOR FILING DATE: 1998-09-24
 TITLE OF INVENTION: Alzheimer's Disease Secretase, APP Substrates Therefor and Use TITLE OF INVENTION: Therefor FILE REFERENCE: 29915/6280FG
 PRIOR FILING DATE:
 PRIOR APPLICATION NUMBER:
 APPLICANT:
 PRIOR APPLICATION NUMBER:
 CURRENT APPLICATION NUMBER: US/09/794,927A
 APPLICANT: Gurney et al
 TYPE: PRT
ORGANISM: Artificial Sequence
 TYPE: PRT
ORGANISM: Artificial sequence
 FEATURE:
 LENGTH:
 FEATURE:
 LENGTH:
 Y Match 100.0%;
Local Similarity 100.0%;
les 4; Conservative (
 Local
1 NLDA 4
 4 NLDA 7
 1 NLDA 4
 4;
 Similarity
 Gurney et al.
 Conservative
 1998-09-24
 1999-09-23
 100.0%;
 2.0
 60/101,594
 PCT/US99/20881
 0
 0;
 Score 20;
Pred. | No.
 Score
Pred!
 DB 5;
Lu. No. 25;
Mismatches
 mismatches
 NO;
 5; Length 10;
 Length 10;
 Indels
 Indels
 0;
 0
 Gaps
 Gaps
 0;
 0
```

망

0;

```
₽
 ş
 RESULT 20
US-09-548-366F-63
 ; OTHER INFORMATION: Synthetic peptide US-09-548-366F-63
 PCT-US02-31846-1
 SEQ ID NO 63
LENGTH: 10
TYPE: PRT
 Sequence 1, Applicat GENERAL INFORMATION:
 Sequence 63, Application GENERAL INFORMATION:
APPLICANT: GURNEY ET AL.
 Query Match
Best Local Similarity
Query Match
Best Local Similarity
 Matches
 APPLICANT: Jacobs, Jon S.
APPLICANT: Scherer, Brian S.
TITLE OF INVENTION: Hydroxypropylamines
FILE REFERENCE: 01-1555-C
 PRIOR APPLICATION NUMBER: PCT/US99/20881
PRIOR FILING DATE: 1999-09-23
PRIOR APPLICATION NUMBER: US 60/101,594
PRIOR FILING DATE: 1998-09-24
NUMBER OF SEQ ID NOS: 73
 TITLE OF INVENTION: ALZHEIMER'S DISEASE SECRETASE, APP SUBSTRATES THEREFOR AND USES TITLE OF INVENTION: THEREOF FILE REFERENCE: 29915/6280J
 PRIOR APPLICATION NUMBER: 60/334,058
PRIOR FILING DATE: 2001-11-28
NUMBER OF SEQ ID NOS: 9
 PRIOR APPLICATION NUMBER: 60/327,149
PRIOR FILING DATE: 2001-10-04
 CURRENT APPLICATION NUMBER: PCT/US02/31846
CURRENT FILING DATE: 2002-11-19
 SOFTWARE: PatentIn version 3.1
 PRIOR APPLICATION NUMBER: US 09/404,133 PRIOR FILING DATE: 1999-09-23
 CURRENT APPLICATION NUMBER: US/09/548,366F
 NAME/KEY: MISC_FEATURE
LOCATION: (11)..(11)
OTHER INFORMATION: covalent attachment of oregon green
-USO2-31846-1
 SOFTWARE: PatentIn version 3.1
 PRIOR APPLICATION NUMBER: US 60/155,493
 LENGTH: 13
TYPE: PRT
ORGANISM: Artificial Sequence
 APPLICANT: Fisher, Jed F.
 PRIOR FILING DATE: 1999-09-23
 NAME/KEY: MISC_FEATURE
LOCATION: (1)..(1)
OTHER INFORMATION: N-terminal biotin
 FEATURE:
 ORGANISM: Artificial sequence
 FEATURE:
 OTHER INFORMATION: synthetic peptide
 FEATURE:
 ID NO
 4 NLDA 7
 1 NLDA 4
 Application PC/TUS0231846
 Application US/09548366F
 Conservative
 100.0%;
 2002-11-
 100.0%;
 0;
Score 20;
Pred. No.
 Score 20;
Pred. No.
 Mismatches
 DB 1;
34;
 0;
 Length 13;
 Length 10
 Indels
 0;
 Gaps
 0
```

```
Query Match
Best Local Similarity
"-+ches 4; Conserva
 밁
 밁
 Q
 US-10-264-707-1
 Sequence 1, Applicat GENERAL INFORMATION:
 GENERAL INFORMATION:
 SEQ ID NO 1
 Sequence 1, Application US/10264707
 Matches
 CURRENT APPLICATION NUMBER: US/10/160,777
CURRENT FILING DATE: 2002-10-15
PRIOR APPLICATION NUMBER: 60/343,772
PRIOR FILING DATE: 2001-12-28
PRIOR APPLICATION NUMBER: 60/332,639
PRIOR APPLICATION NUMBER: 60/332,639
PRIOR FILING DATE: 2001-11-19
 CURRENT APPLICATION NUMBER: US/10/264,707 CURRENT FILING DATE: 2002-10-04 PRIOR APPLICATION NUMBER: 60/327,149 PRIOR FILING DATE: 2001-10-04
 APPLICANT: Varghese, John
TITLE OF INVENTION: Hydroxy Alkyl Amines
FILE REFERENCE: 01-1632-C
 APPLICANT: Freskos, John
APPLICANT: Brown, David L.
APPLICANT: Fobian, Yvette M.
 PRIOR APPLICATION NUMBER: 60/334,058 PRIOR FILING DATE: 2001-11-28 NUMBER OF SEQ ID NOS: 9
 APPLICANT: Jacobs, Jon S.
APPLICANT: Scherer, Brian S.
TITLE OF INVENTION: Hydroxypropylamines
FILE REFERENCE: 01-1555-B
NUMBER OF SEQ ID NOS:
SOFTWARE: PatentIn ve
 PRIOR APPLICATION NUMBER: 60/295,332 PRIOR FILING DATE: 2001-06-01
 APPLICANT: Fisher, Jed F. APPLICANT: Jacobs, Jon S
 APPLICANT:
 APPLICANT:
 SOFTWARE: PatentIn version 3.1
 LOCATION: (11)..(11)
OTHER INFORMATION: covalent attachment of oregon
 NAME/KEY: MISC_FEATURE
LOCATION: (1)..(1)
OTHER INFORMATION: N-terminal biotin
 OTHER INFORMATION: synthetic peptide
 FEATURE:
 ORGANISM: Artificial Sequence
 TYPE: PRT
 NAME/KEY: MISC_FEATURE
 FEATURE:
 FEATURE:
 ENGTH:
 4 NLDA
 1 NLDA 4
 1 NLDA 4
 Application US/10160777
 Fang, Larry
 Romero, Arthur G.
 Conservative
 Conservative
 100.0%;
 0
 0;
 Score 20;
Pred. No.
 Mismatches
 Mismatches
 0;
 Length 13;
 Indels
 Indels
 0
 0
 Gaps
 Gaps
```

0;

```
RESULT 25
US-09-724-566A-53
 밁
 Вb
 Q
 PCT-US02-31846-9
 ; NAME/KEY: MISC_FEATURE
; LOCATION: (11)..(11)
; OTHER INFORMATION: covalent attachment of oregon
US-10-160-777-1
 PCT-US02-31846-9
 APPLICANT:
APPLICANT:
 Sequence 53, Application US/09724566A GENERAL INFORMATION:
 Query Match
Best Local
 SOFTWARE: PatentIn version 3.1
SEQ ID NO 9
LENGTH: 30
 Matches
 APPLICANT: Anderson, John P.
APPLICANT: Basi, Guridbal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, Normand
 GENERAL INFORMATION:
 Matches
 Query Match
Best Local :
 TITLE
 Sequence
 APPLICANT:
 APPLICANT:
 APPLICANT:
 CURRENT FILING DATE: 2002-11-19
PRIOR APPLICATION NUMBER: 60/327,149
PRIOR FILING DATE: 2001-10-04
PRIOR APPLICATION NUMBER: 60/334,058
 PRIOR FILING DATE: 2001-11-28
 CURRENT APPLICATION NUMBER: PCT/US02/31846
CURRENT FILING DATE: 2002-11-19
 APPLICANT: Jacobs, Jon S.
APPLICANT: Scherer, Brian S.
TITLE OF INVENTION: Hydroxypropylamines
FILE REFERENCE: 01-1555-C
 APPLICANT:
 APPLICANT: Fisher, Jed F.
 OTHER INFORMATION: synthetic peptide
 ORGANISM: Artificial Sequence
 FEATURE:
 OTHER INFORMATION: N-terminal biotin
 NAME/KEY: MISC_FEATURE LOCATION: (1)..(1)
 FEATURE:
 OTHER INFORMATION: synthetic peptide
 FEATURE:
 ORGANISM: Artificial sequence
 25
 Local Similarity
 / Match 100.0%;
Local Similarity 100.0%;
nes 4; Conservative 0
 1 NLDA 4
 QF
 1 NLDA 4
 NLDA 28
 I: McConlogue, Lisa
INVENTION: Beta-Secretase
 4;
 Power, Michael
Sinha, Sukanto
Tatsuno, Gwen
 Frigon, Normand
John, Varghese
Power, Michael
 Application PC/TUS0231846
 Tung, Jay
Wang, Shuwen
 Conservative
 100.0%;
 0;
 0;
 Score 20;
Pred. No.
 Score 20; DB Pred. No. 34;
 Mismatches
Enzyme Compositions and
 Mismatches
 DB
87;
 DB
 6;
 0;
 0,
 Length 30;
 Length 13;
 green
 Indels
 Indels
 0;
 0;
 Gaps
 0,
 0;
```

ρ γ

1 NLDA 4

25 NLDA 28

```
OTHER INFORMATION: Description of Artificial; OTHER INFORMATION: oligopeptide substrate US-09-471-669A-53
 밁
 US-09-471-669A-53
 δÃ
 ; OTHER INFORMATION: Synthetic oligopeptide substrate US-09-724-566A-53
 Matches
 Query Match
Best Local
 SEQ ID NO 53
LENGTH: 30
 Sequence 53, Applica GENERAL INFORMATION:
 CURRENT APPLICATION NUMBER: US/09/471,669A CURRENT FILING DATE: 1999-12-24 PRIOR APPLICATION NUMBER: US 60/114,408 PRIOR EILING DATE: 1998-12-31 PRIOR APPLICATION NUMBER: US 60/119,571 PRIOR APPLICATION NUMBER: US 60/119,571 PRIOR FILING DATE: 1999-02-10
 SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 53 LENGTH: 30
 Matches
 Best
 Query Match
 PRIOR APPLICATION NUMBER: US 60/139,172
PRIOR FILING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 108
SOFTWARE: Patentin Ver. 2.1
 TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS FILE REFERENCE: 015270-006430US
 APPLICANT:
 APPLICANT
 APPLICANT
 APPLICANT:
 APPLICANT:
 CURRENT APPLICATION NUMBER: US/09/724,566A CURRENT FILING DATE: 2000-11-28 PRIOR APPLICATION NUMBER: US 09/501,708 PRIOR FILING DATE: 2000-02-10 PRIOR APPLICATION NUMBER: 60/119,571 PRIOR FILING DATE: 1999-02-10
 APPLICANT
 APPLICANT:
 APPLICANT:
 APPLICANT:
 ORGANISM: Artificial Sequence FEATURE:
 APPLICANT: Anderson, John P.
 PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1999-0
 TYPE: PRT
 APPLICANT:
 NUMBER OF SEQ ID NOS:
 TITLE OF INVENTION: FILE REFERENCE: 228-
 ORGANISM: Artificial Sequence FEATURE:
 TYPE: PRT
 Local Similarity
 25 NLDA 28
 Local Similarity
 1 NLDA 4
 4.
 4;
 Basi, Guriqbal
Doane, Minh Tam
Frigon, Normand
John, Varghese
 Elan Pharmaceuticals,
 Application US/09471669A
 Tung, Jay
Wang, Shuwen
 Power, Michael
Sinha, Sukanto
 McConlogue, Lisa
 Tatsuno, Gwen
 Conservative
 Conservative
 228-US-NEWC2
 1999-06-15
 100.0%;
 Methods
 100.0%;
 60/139,172
 0,
 0;
 Score 20; DB
Pred. No. 87;
 Score 20;
 Mismatches
 Mismatches
 DB 5; Length 30; 87;
 DB
 ŭ
 Sequence: Synthetic
 0;
 0;
 Length 30;
 Indels
 Indels
 0;
 0;
 Gaps
 Gaps
0;
 0;
```

```
Sequence 9, Application US/10264707
GENERAL INFORMATION:
APPLICANT: Fisher, Jed F.
APPLICANT: Jacobs, Jon S.
APPLICANT: Scherer, Brian S.
TITLE OF INVENTION: Hydroxypropylamines
FILE REFERENCE: 01-1555-B
CURRENT FILING DATE: 2002-10-04
PRIOR APPLICATION NUMBER: 60/327,149
PRIOR APPLICATION NUMBER: 60/327,149
PRIOR FILING DATE: 2001-10-04
PRIOR APPLICATION NUMBER: 60/327,149
PRIOR FILING DATE: 2001-11-28
NUMBER OF SEQ ID NOS: 9
SOFTWARE: Patentin version 3.1
SEQ ID NO 9
LENGTH: 30
TYPE: PRI
밁
 밁
 ş
 ; OTHER INFORMATION: synthetic peptide US-10-264-707-9
 ; OTHER INFORMATION: synthetic peptide US-10-160-777-9
 US-10-264-707-9
 PRIOR APPLICATION NUMBER: 60/332,639
PRIOR FILING DATE: 2001-11-19
PRIOR APPLICATION NUMBER: 60/295,332
PRIOR FILING DATE: 2001-06-01
NUMBER OF SEQ ID NOS: 9
SOFTWARE: Patentin version 3.1
SEQ ID NO 9
 Query Match
Best Local Similarity
Matches 4; Conserv
 Sequence 9, Application US/10160777 GENERAL INFORMATION:
 Query Match
Best Local S
 Matches
 TITLE OF INVENTION: Hydroxy Alkyl Amines
FILE REFERENCE: 01-1632-C
CURRENT APPLICATION NUMBER: US/10/160,777
CURRENT FILING DATE: 2002-10-15
PRIOR APPLICATION NUMBER: 60/343,772
PRIOR FILING DATE: 2001-12-28
 APPLICANT: Brown, David L.
APPLICANT: Robian, Yvette M.
APPLICANT: Fang, Larry
APPLICANT: Romero, Arthur G.
APPLICANT: Varghese, John
 APPLICANT: Freskos,
 LENGTH: 30
TYPE: PRT
 FEATURE:
 ORGANISM: Artificial sequence
 FEATURE:
 ORGANISM: Artificial Sequence
 / Match 100.0%; Score 20; DB Local Similarity 100.0%; Pred. No. 87; ses 4; Conservative 0; Mismatches
 25 NLDA 28
25 NLDA 28
 1 NLDA 4
 1 NLDA 4
 Conservative
 John
 100.0%; S
100.0%; P
utive 0;
 Score 20; DB
Pred. No. 87;
 Mismatches
 DB 6;
 <u>ن</u>
 0,
 0
 Length 30;
 Length 30;
 Indels
 0,
 0;
 Gaps
 0
 0;
```

```
RESULT 31
US-10-174-410-191
 밁
 ; NUMBER OF SEQ ID NOS: 336
; SOFTWARE: FASTSEQ for Windows Version 4.0
; SEQ ID NO 180
; LENGTH: 32
; TYPE: PAT
; ORGANISM: Arabidopsis thaliana
US-10-174-410-180
 밁
 γ
 Query Match
Best Local Similarity
Thehes 4; Conserv.
 RESULT 29
US-10-174-410-177
 ; LENGTH: 32
; TYPE: PRT
; ORGANISM: Catharanthus roseus
US-10-174-410-177
 US-10-174-410-180
 Sequence 177, Applic GENERAL INFORMATION:
 NUMBER OF SEQ ID NOS: 336
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 177
 Query Match
Best Local 9
 GENERAL INFORMATION:
 Sequence 180, Application US/10174410
 Matches
 APPLICANT: Louie, Gordon V.
APPLICANT: Buchanan, Sean Grant
APPLICANT: Buchanan, Ketan S.
APPLICANT: Sauder, J. Michael
TITLE OF INVENTION: CRYSTALS AND STRUCTURES OF
TITLE OF INVENTION: 2C-METHLY-D-ERYTHRITOL, 2,4-CYCLODIPHOSPHATE SYNTHASE MECPS
 PILE REFERENCE: 524982000300
CURRENT APPLICATION NUMBER: US/10/174,410
CURRENT FILING DATE: 2002-06-17
PRIOR APPLICATION NUMBER: 60/299,058
PRIOR FILING DATE: 2001-06-18
 FILE REFERENCE: 524982000300
CURRENT APPLICATION NUMBER: US/10/174,410
CURRENT FILING DATE: 2002-06-17
 APPLICANT: Sauder, J. Michael
TITLE OF INVENTION: CRYSTALS AND STRUCTURES OF
TITLE OF INVENTION: 2C-METHLY-D-ERYTHRITOL, 2,4-CYCLODIPHOSPHATE SYNTHASE MECPS
 PRIOR APPLICATION NUMBER: 60/299,058 PRIOR FILING DATE: 2001-06-18
 APPLICANT:
 23 NLDA 26
 Local Similarity tes 4; Conserv
 23 NLDA 26
 1 NLDA 4
 1 NLDA 4
 Buchanan, Sean Grant
Gajiwala, Ketan S
 Application US/10174410
 100.0%; Score 20; ilarity 100.0%; Pred. No. Conservative 0; Mismatcl
 100.0%; Score 20; DB ilarity 100.0%; Pred. No. 94; Conservative 0; Mismatches
 Gordon V.
 mismatches
 DB 6; Length 32;
 DB 6; Length 32;
 0
 Indels
 Indels
 0
 0;
 Gaps
 Gaps
 0;
 0
```

Sequence 191, Application US/10174410 GENERAL INFORMATION:

APPLICANT: APPLICANT:

Louie, Gordon V. Buchanan, Sean Grant Gajiwala, Ketan S.

```
PRIOR APPLICATION NUMBER: 60/299,058
PRIOR FILING DATE: 2001-66-18
NUMBER OF SEQ ID NOS: 336
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 191
LENGTH: 32
TYPE: PRT
ORGANISM: L. innocua
 Sequence 211, Application US/10174410
GENERAL INFORMATION:
APPLICANT: LOUIE, Gordon V.
APPLICANT: Buchanan, Sean Grant
APPLICANT: Buchanan, Sean Grant
APPLICANT: Sauder, J. Michael
TITLE OF INVENTION: CRYSTALS AND STRUCTURES OF
TITLE OF INVENTION: 2C-METHLY-D-ERYTHRITOL, 2,4-
FILE REFERENCE: 52498200300
CURRENT APPLICATION NUMBER: US/10/174,410
PRIOR APPLICATION NUMBER: 60/299,058
PRIOR APPLICATION NUMBER: 60/299,058
 RESULT 33
US-10-174-410-211
 В
 ; ORGANISM: L. 1
US-10-174-410-198
 RESULT 32
US-10-174-410-198
 DЬ
 Query Match
Best Local Similarity
"hehes 4; Conserve
 NUMBER OF SEQ ID NOS: 336
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 198
 Matches
 Query Match
 Sequence 198, Application US/10174410 GENERAL INFORMATION:
PRIOR FILING DATE:
 PRIOR APPLICATION NUMBER: 60/299,058
PRIOR FILING DATE: 2001-06-18
NUMBER OF SEQ ID NOS: 336
 CURRENT APPLICATION NUMBER: US/10/174,410 CURRENT FILING DATE: 2002-06-17
 APPLICANT: Buchanan, Sean Grant
APPLICANT: Gajiwala, Ketan S.
APPLICANT: Sauder, J. Michael
TITLE OF INVENTION: CRYSTALS AND STRUCTURES OF
TITLE OF INVENTION: 2C-METHLY-D-ERYTHRITOL, 2,
FILE REFERENCE: 524982000300
CHERERE ASSULTANTIAN NUMBER ASSULTANTIAN PROPERTY AND ASSULTANT ASSULTANT AND ASSULTANT ASS
 APPLICANT: Louie, Gordon V.
APPLICANT: Buchanan, Sean (
APPLICANT: Gajiwala, Ketan
APPLICANT: Sauder, J. Mich
 CURRENT APPLICATION NUMBER: US/10/174,410 CURRENT FILING DATE: 2002-06-17
 APPLICANT: Sauder, J. Michael
TITLE OF INVENTION: CRYSTALS AND STRUCTURES OF
TITLE OF INVENTION: 2C-METHLY-D-ERYTHRITOL, 2,4-CYCLODIPHOSPHATE SYNTHASE MECPS
FILE REFERENCE: 524982000300
 LENGTH:
 Local Similarity
 23 NLDA 26
 1 NLDA 4
 23 NLDA 26
 1 NLDA 4
 4; Conservative
 monocytogenes
 Conservative
 2001-06-18
 100.0%;
 100.0%;
 0
 0,
 Score 20;
Pred. No.
 Pred. No.
 Score 20;
 Mismatches
 Mismatches
 94;
 DB 6;
 2,4-CYCLODIPHOSPHATE SYNTHASE MECPS
 2,4-CYCLODIPHOSPHATE SYNTHASE MECPS
 6
 0;
 Length 32;
 Length 32;
 Indels
 Indels
 0;
 0;
 Gaps
 Gaps
 0;
 0;
```

```
뫄
 PCT-US02-31846-6
 RESULT 35
 QΥ
 US-10-174-410-214
 뭥
 ; ORGANISM: Arabidopsis thaliana US-10-174-410-211
 US-10-174-410-214
 SOFTWARE: PatentIn version 3.1
SEQ ID NO 6
LENGTH: 33
 Sequence 6, Application PC/TUS0231846
GENERAL INFORMATION:
APPLICANT: Fisher, Jed F.
APPLICANT: Jacobs, Jon S.
APPLICANT: Scherer, Brian S.
TITLE OF INVENTION: Hydroxypropylamines
FILE REFERENCE: 01-1555-C
 PRIOR APPLICATION NUMBER: 60/299,058
PRIOR FILING DATE: 2001-06-18
NUMBER OF SEQ ID NOS: 336
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 214
LENGTH: 32
TYPE: PRT
 Query Match
Best Local 9
 Sequence 214, Application US/10174410 GENERAL INFORMATION:
 Matches
 SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 211
LENGTH: 32
 CURRENT APPLICATION NUMBER: PCT/US02/31846
CURRENT FILING DATE: 2002-11-19
PRIOR APPLICATION NUMBER: 60/327,149
PRIOR FILING DATE: 2001-10-04
 PRIOR APPLICATION NUMBER: 60/334,058
PRIOR FILING DATE: 2001-11-28
NUMBER OF SEQ ID NOS: 9
 APPLICANT: Gajiwala, Ketan S.
APPLICANT: Sauder, J. Michael
TITLE OF INVENTION: CRYSTALS AND STRUCTURES OF
TITLE OF INVENTION: 2C-METHLY-D-ERYTHRITOL, 2,
ETLE REFERENCE: 524992000300
 Matches
 Query Match
Best Local
 CURRENT APPLICATION NUMBER: US/10/174,410 CURRENT FILING DATE: 2002-06-17
 OTHER INFORMATION: synthetic peptide
 ORGANISM: Artificial Sequence
 TYPE: PRT
 APPLICANT: Louie, Gordon V. APPLICANT: Buchanan, Sean
 FEATURE:
 FEATURE
 ORGANISM: Treponema pallidum
WAME/KEY: MISC_FEATURE
 TYPE: PI
 23 NLDA 26
 1 NLDA 4
 23 NLDA 26
 Local Similarity
 Local Similarity es 4; Conserv
 1 NLDA 4
 Buchanan, Sean Grant
Gajiwala, Ketan S.
 Conservative
 Conservative
 100.0%;
 100.0%;
 0;
 0;
 Score 20; DB
Pred. No. 94;
 Score
Pred:
 Mismatches
 Mismatches
 4.0
 No.
 4.0
 DB 6;
 2,4-CYCLODIPHOSPHATE SYNTHASE MECPS
 6;
 Length 32;
 Length 32;
 Indels
 Indels
 0;
 0,
 Gaps
 Gaps
 0;
 0;
```

```
밁
 밁
 ; OTHER INFORMATION: P26-P4'sw peptide substrate US-09-724-566A-63
 US-09-471-669A-63
 RESULT 37
 US-09-724-566A-63
 PCT-US02-31846-6
 SEQ ID NO 63
LENGTH: 33
TYPE: PRT
ORGANISM: Homo sapiens
 Sequence 63, Application US/09471669A GENERAL INFORMATION:
 Query Match
Best Local :
 GENERAL INFORMATION:
 Matches
 Sequence 63,
 Matches
 Best Local Similarity
 APPLICANT: MCCONlogue, Lisa
TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and
TITLE OF INVENTION: Methods
PILE REFERENCE: 228-US-NEWC2
CURRENT APPLICATION NUMBER: US/09/724,566A
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: US 09/501,708
PRIOR APPLICATION NUMBER: US 09/501,708
PRIOR FILING DATE: 2000-02-10
PRIOR FILING DATE: 2000-02-10
 APPLICANT:
 APPLICANT: Anderson, John P.
APPLICANT: Basi, Guridbal
APPLICANT: Doane, Minh Tam
APPLICANT: Frigon, Normand
 PRIOR APPLICATION NUMBER: 60/119,571
PRIOR EPILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: 60/139,172
PRIOR FILING DATE: 1999-06-15
 NUMBER OF SEQ ID NOS: 104
SOFTWARE: FastSEQ for Windows Version 4.0
 APPLICANT:
 APPLICANT: Anderson, John P.
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
 APPLICANT:
 LOCATION: (1)..(1)
OTHER INFORMATION: N-terminal biotin
 APPLICANT:
 APPLICANT:
 APPLICANT:
 FEATURE:
 y Match 100.0%;
Local Similarity 100.0%;
hes 4; Conservative (
 1 NLDA 4
 28 NLDA 31
 28 NLDA 31
 1 NLDA 4
 4.
 Frigon, Normand
John, Varghese
Power, Michael
Sinha, Sukanto
 Power, Michael
Sinha, Sukanto
Tung, Jay
Wang, Shuwen
McConlogue, Lisa
 Tung, Jay
Wang, Shuwen
 John, Varghese
Power, Michael
 Basi, Guriqbal
Doane, Minh Tam
 Application US/09724566A
 Tatsuno, Gwen
 Frigon, Normand
 Tatsuno, Gwen
 Conservative
 100.0%;
 0;
 0;
 Score 20; DB Pred. No. 97; 0; Mismatches
 Score 20;
Pred. No.
 Mismatches
 97;
 DB 5; Length 33;
 0
 0;
 Length 33;
 Indels
 Indels
 0;
 0;
 Gaps
 Gaps
 0
 0;
```

```
ρ
 ; FEATURE:
, NAME/KEY: MISC_FEATURE
; LOCATION: (1)..(1)
; OTHER INFORMATION: N-terminal biotin
US-10-264-707-6
 В
 ; OTHER INFORMATION: P26-P4'sw peptide substrate US-09-471-669A-63
 US-10-264-707-6
 SOFTWARE: Pate
SOFTWARE: Pate
SEQ ID NO 63
FENGTH: 33
 PRIOR APPLICATION NUMBER: 60/34,058
PRIOR ETILING DATE: 2001-11-28
NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn version 3.1
SEQ ID NO 6
LENGTH: 33
TYPE: PRT
 Sequence 6, Application US/10264707 GENERAL INFORMATION:
APPLICANT: Fisher, Jed F.
 Query Match
Best Local Similarity
Matches 4; Conserv
 Matches
 Query Match
Best Local
 APPLICANT: Jacobs, Jon S.
APPLICANT: Scherer, Brian S.
TITLE OF INVENTION: Hydroxypropylamines
FILE REFERENCE: 01-1555-B
 PRIOR APPLICATION NUMBER: US 60/119,571
PRIOR FILING DATE: 1999-02-10
PRIOR APPLICATION NUMBER: US 60/139,172
PRIOR ETLING DATE: 1999-06-15
NUMBER OF SEQ ID NOS: 108
 CURRENT APPLICATION NUMBER: US/10/264,707
CURRENT FILING DATE: 2002-10-04
PRIOR APPLICATION NUMBER: 60/327,149
PRIOR FILING DATE: 2001-10-04
 CURRENT APPLICATION NUMBER: US/09/471,669A
CURRENT FILING DATE: 1999-12-24
PRIOR APPLICATION NUMBER: US 60/114,408
PRIOR FILING DATE: 1998-12-31
 APPLICANT: Elan Pharmaceuticals, Inc.
TITLE OF INVENTION: BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS
FILE REFERENCE: 015270-006430US
 LENGTH: 33
TYPE: PRT
ORGANISM: Homo sapiens
 OTHER INFORMATION: synthetic peptide
 FEATURE:
 ORGANISM: Artificial Sequence
 FEATURE:
28 NLDA
 Local Similarity les 4; Conserv
 28 NLDA 31
 1 NLDA 4
 1 NLDA 4
 PatentIn Ver.
 100.0%; ilarity 100.0%; Conservative 0
 Conservative
 100.0%; Score 20; DB 100.0%; Pred. No. 97;
 0
 0;
 Score 20;
Pred. No.
 Mismatches
 Mismatches
 DB 5; Length 33; 97;
 DB 6; Length 33;
 0;
 0
 Gaps
 Gaps
 0;
 0;
```

RESULT 39
US-10-160-777-6
; Sequence 6, Application US/10160777
; GENERAL INFORMATION:
; APPLICANT: Freskos, John

Yvette M.

0,

```
: NAME/KEY: MISC_FEATURE
: LOCATION: (32)..(32)
: OTHER INFORMATION: covalent attachment
PCT-US02-31846-4
 В
 : LOCATION: (1)..(1)
: OTHER INFORMATION: N-terminal biotin US-10-160-777-6
 SOFTWARE: PatentIn version 3.1
SEQ ID NO 4
LENCTH: 34
TYPE: PRT
 Query Match
Best Local Similarity 100.
">+*ches 4; Conservative
 Sequence 4, Application PC GENERAL INFORMATION:
APPLICANT: Fisher, Jed F.
 APPLICANT: Jacobs, Jon S.
APPLICANT: Scherer, Brian S.
APPLICANT: Scherer, Brian S.
TITLE OF INVENTION: Hydroxypropylamines
FILE REFERENCE: 01-1555-C
CURRENT APPLICATION NUMBER: PCT/US02/31846
CURRENT FILING DATE: 2002-11-19
PRIOR APPLICATION NUMBER: 60/327,149
PRIOR APPLICATION NUMBER: 60/327,149
PRIOR EILING DATE: 2001-10-04
 PRIOR APPLICATION NUMBER: 60/:
PRIOR FILING DATE: 2001-11-28
NUMBER OF SEQ ID NOS: 9
 SEQ ID NO 6
 FEATURE:
 OTHER INFORMATION: N-terminal biotin
 OTHER INFORMATION: synthetic peptide
 ORGANISM: Artificial Sequence
 -US02-31846-4
 NAME/KEY: MISC_FEATURE LOCATION: (1)..(1)
 FEATURE:
 CURRENT FILING DATE: 2002-10-15
PRIOR APPLICATION NUMBER: 60/343,772
PRIOR FILING DATE: 2001-12-28
PRIOR APPLICATION NUMBER: 60/332,639
PRIOR FILING DATE: 2001-11-19
PRIOR APPLICATION DATE: 2001-11-19
 NUMBER OF SEQ ID NOS: 9
 PRIOR APPLICATION NUMBER: 60/295,332 PRIOR FILING DATE: 2001-06-01
 CURRENT APPLICATION NUMBER: US/10/160,777
CURRENT FILING DATE: 2002-10-15
 APPLICANT: Varghese, John
TITLE OF INVENTION: Hydroxy Alkyl Amines
FILE REFERENCE: 01-1632-C
 FEATURE:
OTHER INFORMATION: synthetic peptide
 ORGANISM: Artificial sequence
 FEATURE
 NAME/KEY: MISC_FEATURE
 TYPE: PRT
 LENGTH: 33
 Local Similarity
 28 NLDA 31
 1 NLDA 4
 PatentIn version 3.1
 Application PC/TUS0231846
 Brow.
Fobian, ...
To, Larry
Art
 Romero, Arthur G.
 2001-06-01
 100.0%;
 100.0%;
 60/334,058
 0
Score 20;
Pred. No.
 Score 20;
Pred. No.
 Mismatches
 of oregon
 97;
 Length 34;
 green
 Length 33;
 Indels
 0;
 Gaps
 0,
```

```
APPLICANT: Varghese, John
TITLE OF INVENTION: Hydroxy Alkyl Amines
FILE REFERENCE: 01-1632-C
CURRENT APPLICATION NUMBER: US/10/160;777
CURRENT FILING DATE: 2002-10-15
PRIOR APPLICATION NUMBER: 60/343,772
PRIOR FILING DATE: 2001-12-28
PRIOR FILING DATE: 2001-11-19
PRIOR APPLICATION NUMBER: 60/332,639
PRIOR FILING DATE: 2001-10-6-01
PRIOR FILING DATE: 2001-06-01
 В
 US-10-160-777-4
 ; OTHER INFORMATION: c. US-10-264-707-4
 밁
SOFTWARE:
 US-10-264-707-4
 Sequence 4, Application US/10160777 GENERAL INFORMATION:
 APPLICANT:
APPLICANT:
APPLICANT:
 Matches
 Query Match
Best Local
 Sequence 4, Application US/10264707 GENERAL INFORMATION:
 APPLICANT: Freskos, John
APPLICANT: Brown, David L.
APPLICANT: Fobian, Yvette
 NUMBER OF SEQ ID NOS:
 SEQ ID NO 4
 APPLICANT: Fisher, Jed F.
APPLICANT: Jacobs, Jon S.
APPLICANT: Scherer, Brian S.
TITLE OF INVENTION: Hydroxypropylamines
FILE REFERENCE: 01-1555-B
CURRENT APPLICATION NUMBER: US/10/264,707
CURRENT FILING DATE: 2002-10-04
 Matches
 PRIOR FILING DATE: 2001-11-28
NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn version 3.1
 PRIOR APPLICATION NUMBER: 60/334,058 PRIOR FILING DATE: 2001-11-28
 PRIOR APPLICATION NUMBER: 60/327,149
PRIOR FILING DATE: 2001-10-04
 NAME/KEY: MISC_FEATURE
LOCATION: (1)..(1)
OTHER INFORMATION: N-terminal biotin
 LENGTH: 34
TYPE: PRT
ORGANISM: Artificial Sequence
 NAME/KEY: MISC_FEATURE LOCATION: (32)..(32)
 FEATURE:
 FEATURE:
OTHER INFORMATION: synthetic peptide
 FEATURE:
 25 NLDA 28
 Local Similarity
 1 NLDA 4
 25 NLDA 28
 1 NLDA 4
 PatentIn version 3.1
 Romero, Arthur G.
 Fang, Larry
 Conservative
 Conservative
 Yvette M.
 covalent attachment of oregon green
 100.0%;
 0;
 0;
 Score 20; DB 6;
Pred. No. 1e+02;
 Mismatches
 Mismatches
 0;
 Length 34;
 Indels
 Indels
 0,
 0,
 Gaps
 Gaps
```

0;

```
PCT-US02-32727-14180; Sequence 14180, Application PC/TUS0232727; GENERAL INFORMATION:
 밁
 δÃ
 ; OTHER INFORMATION: Xaa-Ala or Gly or Pro or Arg US-09-513-999C-5901
 RESULT 43
US-09-513-999C-5901
 밁
 ; FEATURE:
NAME/KEY: MISC_FEATURE
; LOCATION: (32)..(32)
; OTHER INFORMATION: covalent attachment of oregon green
US-10-160-777-4
 RESULT 44
 PRIOR APPLICATION NUMBER: US 60/122,487
PRIOR FILING DATE: 1999-02-26
NUMBER OF SEQ ID NOS: 36681
SOFTMARE: Patent.pm
SEQ ID NO 5901
 Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 4; Conservative (
 Query Match
Best Local (
 Matches
 APPLICANT:
APPLICANT:
APPLICANT:
 APPLICANT: Mitcham, Jennifer APPLICANT: Skeiky, Yasir APPLICANT: Persing, David APPLICANT: Bhatia, Ajay APPLICANT: Maisonneuve, Jean
 FEATURE:
NAME/KEY: UNSURE
LOCATION: 24
OTHER INFORMATION: Y
 CURRENT APPLICATION NUMBER: US/09/513,999C CURRENT FILING DATE: 2000-02-24
 APPLICANT: Duclert, A.
APPLICANT: Giordano, J.Y.
TITLE OF INVENTION: Expressed Sequence Tags and Encoded Human Proteins.
FILE REFERENCE: 59.052.REG
 Sequence 5901, Application US/09513999C SENERAL INFORMATION:
 LENGTH: 61
TYPE: PRT
 APPLICANT: Dumas Milne Edwards, J.B.
 NAME/KEY: MISC_FEATURE
LOCATION: (1)...(1)
OTHER_INFORMATION: N-terminal biotin
 NAME/KEY: UNSURE LOCATION: 59
 FEATURE:
 ORGANISM: Homo sapiens
 OTHER INFORMATION: synthetic peptide
 ORGANISM: Artificial sequence FEATURE:
 FEATURE:
 31 NLDA 34
 MATCH 100.0%;
Local Similarity 100.0%;
les 4; Conservative 0
 25 NLDA 28
 1 NLDA 4
 1 NLDA 4
 Skeiky, Yasir
Persing, David
Bhatia, Ajay
Maisonneuve, Je
Zhang, Yanni
Zhang, Yanni
Wang, Siqing
Jen, Shyian
 Xaa=His or Gln
 Jean Francois
 0
 0;
 Score 20;
Pred. No.
 Score 20; DB 5;
Pred. No. 1.9e+02;
Mismatches 0;
 red. No. 1e+02;
Mismatches
 DB 6; Length 34;
 0,
 Length 61;
 Indels
 0;
 0;
 Gaps
 Gaps
 0,
 0;
```

```
Search completed: February Job time: 14 secs
 В
 Ωy
 RESULT 45
US-10-057-498-14180
; Sequence 14180, Ap
 망
 Q
 ; ORGANISM: Propioni acnes US-10-057-498-14180
 ; ORGANISM: Propioni acnes
PCT-US02-32727-14180
 GENERAL INFORMATION:

APPLICANT: Mitcham, Jennifer

APPLICANT: Skeiky, Yasir

APPLICANT: Skeiky, Vasir

APPLICANT: Persing, David

TITLE OF INVENTION: Compositions and Methods for the Therapy and Diagnosis of Acnorate ETLE REFERENCE: 210121.514

CURRENT APPLICATION NUMBER: US/10/057,498

CURRENT FILING DATE: 2001-04-20

NUMBER OF SEQ ID NOS: 29212

SEQ ID NO 14180

LENGTH: 62

TYPE: PRT
 Query Match
Best Local S
Matches 4
 CURRENT APPLICATION NUMBER: PCT/US02/32727
CURRENT FILING DATE: 2002-10-11
NUMBER OF SEQ ID NOS: 30992
SEQ ID NO 14180
LENGTH: 62
 Matches
 Query Match
Best Local Similarity
 APPLICANT:
APPLICANT:
APPLICANT:
 APPLICANT: Carter, Darrick
APPLICANT: Barth, Brenda
APPLICANT: Douglass, John
TITLE OF INVENTION: Compositions and Methods for the Therapy and Diagnosis of Acnifile Reference: 210121.514C1
 Local Similarity nes 4; Conserv
 œ
 1 NLDA 4
 1 NLDA 4
 8 NLDA 11
 NLDA 11
 4;
 Benson, Darin
Jones, Robert
 Lodes, Michael
 100.0%;
ilarity 100.0%;
Conservative (
 100.0%; ilarity 100.0%; Conservative 0;
 Application US/10057498
 6
 2003, 11:39:04
 0
 0,
 Score 20; DB Pred. No. 2e+ 0; Mismatches
 Score 20; DB
Pred. No. 2e+
); Mismatches
 DB 6;
2e+02;
 DB 1;
2e+02;
 0,
 Length 62;
 Length 62
 Indels
 0;
 0
 Gaps
 Gaps
 0;
 0
```

|   | •  | 14)             |   |     |    |    |  |
|---|----|-----------------|---|-----|----|----|--|
|   | •  |                 |   |     |    |    |  |
|   |    | 1               |   | - 1 | 3  |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   | •   |    |    |  |
|   |    |                 |   |     |    |    |  |
| 1 | ', |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
| / |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    | •               |   |     |    | 4  |  |
|   |    | # ,             |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     | i. |    |  |
|   |    |                 | • |     | •  |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    | 4. |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    | <del>4.3.</del> |   |     | ,  |    |  |
|   |    | •               |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   | •  |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   |     |    |    |  |
|   |    |                 |   | 70  | Q. |    |  |
|   |    |                 |   | •   |    |    |  |

```
Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries
 Title:
Perfect score:
 Result
 Database
 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
 Total number of hits satisfying chosen parameters:
 Searched:
 Scoring table:
 Sequence:
 OM protein - protein search, using sw model
 ö
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 Score
 Match
 BLOSUM62
Gapop 10.0 ,
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
100.00
10
 PIR_73:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
 283224 seqs, 96134422 residues
 20
 February 6, 2003, 11:16:04; Search time 10.5 Seconds (without alignments) 36.623 Million cell updates/sec
 1 nlda 4
 PAT943-6
 GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.
 Length
DB
 Gapext 0.5
$43965
C72809
A88030
$58932
C85933
H90802
HVECRY
H81300
JC4205
T09234
60DEC
T09234
F0DEC
F0D
 1503
 hypothetical prote
hypothetical prote
s-layer glycoprote
hypothetical prote
ribonuclease inhib
ribonuclease inhib
calgranulin c - pi
barstar-like prote
probable ribonucle
ribonuclease inhib
 3-mercaptopyruvate
exogenous DNA-bind
unknown protein en
hypothetical prote
hypothetical prote
sugar transport pr
hypothetical prote
 hypothetical prote
gp87 protein - Myc
protein F46F5 8 [i
DNA-directed RNA p
hypothetical prote
tray protein - Esc
small hydrophobic
hypothetical prote
divided by the control
sypothetical prote
glutaredoxin 1 - E
 Description
```

| RESULT 2 C72809  G72809  G758coles: Mycobacterium phage D29 C;Species: Mycobacterium phage D29 C;Species: Mycobacterium phage D29 C;Species: Mycobacterium phage D29 C;Date: 12-Nov-1999 #sequence_revision 12-Nov-1999 #text_change 20-Apr-2001 C;Accession: C72809 R;Ford, M.E.; Sarkis, G.J.; Belanger, A.E.; Hendrix, R.W.; Hatfull, G.F. J. Mol. Biol. 279, 143-164, 1998 A;Title: Genome structure of mycobacteriophage D29: Implications for phage evol A;Reference number: A72800; MUID:98300335; PMID:9636706 A;Accession: C72809 A;Status: preliminary A;Molccule type: DNA A;Residues: 1-54 <for> A;Cross-references: GB:AF022214; NID:93172250; PIDN:AAC18517.1; PID:93172324 C;Genetics: A;Gene: 87 Query Match Best Local Similarity 100.0%; Score 20; DB 2; Length 54; Best Local Similarity 100.0%; Pred. No. 1.5e+02; Matches 4; Conservative 0; Mismatches 0; Indels 0; Gaps 0;</for> | RESULT 1 \$43965 System of the protein (clone pRK21) - Rhizobium sp. (strain NGR234) (fragment) C; Species: Rhizobium sp. A; Variety: Strain NGR234 C; Date: 20-Oct-1994 #sequence_revision 23-Feb-1996 #text_change 02-Jul-1998 C; Accession: \$43965 R; Perret, X.; Fellay, R.; Bjourson, A.J.; Cooper, J.E.; Brenner, S.; Broughton, Nucleic Acids Res. 22, 1335-1341, 1994 A; Title: Subtraction hybridisation and shot-gun sequencing: a new approach to in the sequence number: \$43961; MUID:94248027; PMID:8190622 A; Accession: \$43965 A; Accession: \$43965 A; Status: nucleic acid sequence not shown A; Residues: 1-53 < PER> C; Reywords: ATP F; 1-53/Domain: ATP-binding cassette homology (fragment) < ABC> Query Match Best Local Similarity 100.0%; Score 20; DB 2; Length 53; Best Local Similarity 100.0%; Pred. No. 1.4e+02; Matches 4; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Mismatches 0; Indels 0; Gaps 0; Mismatches 0; Indels 0; Gaps 0; | 32 20 100.0 114 2 H89785 hypothetical prote of the protein [100.0 116 2 D33227] hypothetical protein [100.0 116 2 T44504] merp protein [100.0 116 2 T45512] hypothetical protein [100.0 116 2 T45512] hypothetical protein [100.0 119 2 F83714] hypothetical protein [100.0 119 2 F83714] hypothetical protein [100.0 120 2 C98286] hypothetical protein [100.0 120 2 C98286] hypothetical protein [100.0 120 2 C98286] hypothetical protein [100.0 120 2 R61425] hypothetical protein [100.0 120 2 A61425] hypothetical secrein [100.0 120 2 A61425] hypothetical secrein [100.0 120 2 A6193] hypothetical secrein [100.0 120 2 A6193] hypothetical protein [100.0 120 2 A6 | 20 100.0 114 2 AG0725 conserve |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| evolution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | )<br>on, W.J.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | + 0 0 0 0 C C C C C C C C C C C C C C C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ית                             |

Qy

1 NLDA 4

```
hypothetical protein [imported] - C; Species: Staphylococcus aureus
 RESULT
C89933
 C;Species: Saccharomyces cerevisiae
C;Date: 28.Nov-1995 #sequence_revision 09-Mar-1996
C;Date: 28.Nov-1995 #sequence_revision 09-Mar-1996
C;Accession: SS993; SS893; SS893; SS8515
R;Treich, I.; Carles, C.; Riva, M.; Sentenac, A.
Gene Expr. 2, 31-37, 1992
 Вb
 Qy
 A;Gene: SGD:RPB12; RPC10
A;Cross-references: MIPS
A;Map position: 8R
 A;Title: RPC10 encodes a new mini subunit shared by yeast A;Reference number: S58932; MUID:92314714; PMID:1617300 A;Accession: S58932
 A; Note:
 A; Molecule type: protein A; Residues: 4-22; 64-69 <
 A; Cros
C; Gene
A; Gene
A; Map
 C;Accession: A88030
R; anonymous, The C. elegans Sequencing Consortium.
Science 282, 2012-2018, 1998
A;Title: Genome sequence of the nematode C. elegans: a platform A;Reference number: A75000; MUID;99069613; PMID:9851916
 A; Accession: S58934
 A; Cross-references:
 DNA-directed RNA polymerase (EC 2.7.7.6) chain ABC10 alpha - N;Alternate names: protein YHR143w-a; RPC10 protein
 밁
 QΥ
 A; Molecule type: DNA
A; Residues: 1-68 <STO>
 A; Note: published errata appeared in Science 283, 35, 1999; Science A; Accession: A88030
 A;Note: see websites genome wustl.edu/gsc/C_elegans/ and www_sanger.ac.uk/Projects/C_el
A;Note: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999; an
 protein F46F5.8 [imported] - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
 RESULT
A88030
 Вþ
 Superfamily: DNA-directed RNA polymerase chain ABC10 alpha Keywords: nucleotidyltransferase; nucleus; transcription
 Genetics:
 Matches
 Query Match
 Molecule type: DNA
Residues: 1-70 <TRE>
 Status: preliminary
 ;Date: 10-May-2001 #sequence_revision 10-May-2001 #text_change 10-May-2001;Accession: A88030
 Matches
 Query Match
 Gene: F46F5.8
 Genetics
 Cross-references:
 position:
 11
 Local
 w
 32
 Local
 1 NLDA 4
 YHR143w-a
 NLDA
 NLDA 4
 NLDA 35
 NLDA
 Similarity
 Similarity
4; Conserv
 12
 Conservative
 MIPS:YHR143w-a;
 EMBL: U23378; NID: g733517;
 GB:chr_II;
 <TRW>
 100.0%;
 100.0%;
 100.0%;
 PIDN:AC78187.1;
 0;
 0;
 Staphylococcus
 Score 20; DB
Pred. No. 1.9
0; Mismatches
 Score
Pred.
 SGD:S0001185
 Mismatches
 No.
 1.9e+02;
hes 0;
 1.9e+02
 PIDN: AAA64417.1; PID: 9733518
 DΒ
 PID:g3886036;
 aureus
 ٧.
 2;
 0
 #text_change
 Length 70
 Length 68
 Indels
 Indels
 (strain
 nuclear
 GSPDB:GN00020;
 yeast (Saccharomyces cerev
 N315)
 02-Jun-2000
 for
 0;
 0;
 RNA polymerases
 Gaps
 investigating
 Gaps
 CESP:F46F5
 0;
 0;
 piolog
```

```
tray protein - Escherichia coli plasmiu
C;Species: Escherichia coli
C;Date: 30-Jun-1988 #sequence_revision
C;Accession: C2503; C32014
A;Cross-references: GB:M15136; NID:g151788;
A;Experimental source: plasmid R100-1 |
R;Inamoto, S: Yoshioka, Y: Ohtsubo, E.
J. Bacteriol. 170, 2749-2757, 1988
 R;Finlay, B.B.; Frost, L.S.; Paranchych, W.
J. Bacteriol. 168, 132-139, 1986
A;Title: Origin of transfer of Incf plasmids and nucleotide
A;Reference number: A25033; MUID:87008371; PMID:3531163
A;Accession: C25033
 RESULT
 밁
 A; Molecule type: DNA
A; Residues: 1-75 <FIN>
 Qy
 R;Hayashi, T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, K.; Igasawara, N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagawa, H. DNA Res. 8, 11-22, 2001
A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7
A;Reference number: A99629; MUID:21156231; PMID:11258796
A;Accession: H90802
 A;Cross-references: GB:BA000007; PIDN:BAB34815.1; A;Experimental source: strain 0157:H7, substrain
 A; Molecule type: DNA
A; Residues: 1-73 < HA
 hypothetical protein ECs1392 [imported] - C;Speciles: Escherichia coli C;Date: 18-7ul-2001 #sequence_revision 18-C;Accession: H90802
 밁
 C;Date: 10-May-2001 #sequence_revision | 10-May-2001 #text_change 22-Oct-2001 C;Accession: C89933
R;Kuroda, M.; Ohta, T.; Uchiyama, I.; Baba, T.; Yuzawa, H.; Kobayashi, I.; Cma, A.; Mizutani-Ui, Y.; Kobayashi, N.; Sawano, T.; Inoue, R.; Kaito, C.; Sc. C.; Shiba, T.; Hattori, M.; Ogasawara, N.; Hayashi, H.; Hiramatsu, K. Lancet 357, 1225-1240, 2001
A;Title: Whole genome sequencing of meticillin-resistant Stapylococcus aureu A; Reference number: A89758; MUID:21311952; PMID:11418146
A;Accession: C89933
A;Status: preliminary
 A; Status: preliminary
 Qy
 н90802
 Query Match
Best Local ;
 Genetics:
Gene: ECs1392
 Matches
 Query Match
Best Local
 Matches
 67 NLDA 70
 20
 Local
 NLDA 4
 NLDA 4
 NLDA
 4;
 Similarity
 Similarity
 Escherichia coli plasmids
 Conservative
 <HAY>
 Conservative
 100.0%;
 100.0%;
 0,
 0,
 Score 20;
Pred. No.
 Score 20;
Pred. No.
 Mismatches
 Mismatches
 30-Jun-1988
 18-Jul-2001 #text_change 18-Jul-2001
 Escherichia coli (strain 0157:H7, substrain
 PIDN:AAA26076.1; PID:g151789
 2e+02;
 DB 2;
2e+02;
 DB 2;
 PIDN:BAB42624.1; GSPDB:GN00149
 ; PID:g13360852;
RIMD 0509952
 #text_change 16-Jul-1999
 0;
 0;
 Length 73;
 Length 72
 Indels
 Indels
 Stapylococcus aureus.
 sequences
 0;
 GSPDB: GN00154
 0;
 Gaps
 Gaps
 of the
 I.; Cui,
 Sekimizu,
 type
 0;
 0;
 Han,
 C
 × 0
```

characterization

of.

the

products

from the traJ and

tray

g

```
C; Accession: JC4205
R; Harriott, O.T.; Hosted, T.J
Gene 161, 63-67, 1995
A; Title: Sequences of nifx, n
A; Reference number: JC4203; M
A; Accession: JC4205
 small hydrophobic protein Cj1158c [imported] - Campylobacter jejuni (strain
C;Species: Campylobacter jejuni
C;Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 03-Jun-2002
 hypothetical 9.1k protein - Frankia sp.
C;Species: Frankia sp.
C;Date: 10-Sep-1995 #sequence_revision
C;Accession: JC4205
 á
 A;Title: The genome sequence of the food-borne A;Reference number: A81250; MUID:20150912; PMII A;Accession: H81320
 C;Accession: H81320
C;Accession: H81320
R;Parkhill, J.; Wren, B.W.; Mungall, K.; Ketley, J.M.; Churcher, C.W.; Quail, M.; Rajandream, M.A.; Rutherford, K.M.; VanVliet, A. Nature 403, 665-668, 2000
 Ş
 A; Description: involved in the C; Superfamily: tray protein
 A; Genome: plasmid
A; Start codon: TTG
 A; Reference number: A3:
A; Accession: C32014
A; Molecule type: DNA
A; Residues: 1-75 < INA>
 Ş
 A;Cross-references: GB
A;Experimental source:
 A; Molecule type: DNA
A; Residues: 1-75 < PAR>
 멍
 A; Experimental source:
 A; Cross-references:
 A; Molecule type: DNA
A; Residues: 1-82 <HAR>
 밁
 A; Gene: Cj1158c
 A; Experimental
 A;Gene: traY
 A;Cross-references: GB:L29299; NID:g497430; PIDN:AAC82972.1;
 A;Status:
 Best Loc
Matches
 Keywords:
 Query Match
 Matches
 Query Match
 Genetics:
 Query Match
 Function:
 Genetics:
 Matches
 Local Similarity
 Local
 57
 Local Similarity
 Н
 σ
 1 NLDA 4
 NLDA
 NLDA
 preliminary
 NLDA
 NLDA 4
 DNA binding;
 4
 4;
 Similarity
 100.
ilarity 100.
Conservative
 Conservative
 Conservative
 Hosted, T.J.; Benson,
 GB:AL139077;
ce: serotype (
 GB:M20941;
ce: plasmid
 A32014;
 pilin formation; plasmid transfer
 100.0%;
 nifW, nifZ, nifB and two ORF MUID:95369734; PMID:7642138
 MUID:88227859;
 .0%;
 . 08;
 NID:g151778;
R100
 conjugation
 : GB:AL111168; NID:g6968444; PIDN:CAB73412.1; PID:g69685
O2, strain NCTC 11168
 0,
 0
 0
 Score 20;
Pred. No.
 Pred. No.
 Score 20;
Pred. No.
 Score 20;
 Mismatches
 Mismatches
 Mismatches
 27-Oct-1995 #text_change
 process
 PMID: 2836369
 PMID:10688204
 PIDN: AAA26073.1;
 2.3e+02;
hes 0;
 2.1e+02;
 2.1e+02;
 DB 2;
 DB 1;
 of
 0;
 0
 Length 75;
 Length
 Length
 bacterial
 Indels
 Indels
 Indels
 Campylobacter jejuni
 in
 75
 the
 PID: g497433
 PID:g151781
 r, C.; Basham,
A.; Whitehead,
 Frankia nitrogen
 22-Oct-1999
 cells
 0;
 0;
 0,
 Gaps
 Gaps
 Gaps
 for
 the exchange
 NCTC
 , s.
 0,
 0;
 0;
 reveals
 fixati
 11168)
 Chilli.
 Barre
 ħγ
 A;Cross-references: GB:M13449; NID:g146272; PIDN:AAA239: R;Chatterjee, P.K.; Sternberg, N.L. Proc. Natl. Acad. Sci. U.S.A. 92, 8950-8954, 1995 A;Title: A general genetic approach in Escherichia coli A;Reference number: I59418; MUID:96004656; PMID:7568050 A;Accession: I59418
 R:Hoeoeg, J.O.; von Bahr-Lindstroem, H.; Joernvall, H.; HC Gene 43, 13-21, 1986
A;Title: Cloning and expression of the glutaredoxin (grx)
A;Reference number: A24397; MUID:87005940; PMID:3530878
A;Accession: A24397
 C; Accessio
R; Benson,
 C;Species: Escherichia coli
C;Date: 19-Feb-1984 #sequence_revision 19-Feb-1984 #text_change 01-Mar-2002
C;Date: 19-Feb-1984 #sequence_revision 19-Feb-1984 #text_change 01-Mar-2002
C;Accession: A00283; A24397; I59418; A64823; A39568
R;Hoeoeg, J.O.; Joernvall, H.; Holmgren, A.; Carlquist, M.; Persson, M.
Eur. J. Blochem. 136, 223-232, 1983
A;Title: The primary structure of Escherichia coli glutaredoxin. Distant homology wit
A;Reference number: A00283; MUID:84004402; PMID:6352262
A;Cross-references: GB:AE000187; GB:U00096; NID:g1787070; PIDN:AAC73936.1; PID:g17870
A;Experimental source: strain K-12, substrain MG1655
R;Sandberg, V.A.; Kren, B.; Fuchs, J.A.; Woodward, C.
 A; Molecule type: DNA
A; Residues: 1-85 <BLAT>
 A;Title: The complete genome A;Reference number: A64720; MA;Accession: A64823
 R:Blattner, F.R.; Plunkett III,
.A.; Rose, D.J.; Mau, B.; Shao,
Science 277, 1453-1462, 1997
 A;Molecule type: protein
A;Residues: 1-85 <HOI>
A;Experimental source: K-12, strain C10-17
R;Hoeoeg, J.O.; von Bahr-Lindstroem, H.; Jo
 glutaredoxin 1 - Escherichia coli ()
N;Alternate names: thioltransferase
 맑
 Š
 A; Molecule type: DNA
A; Residues: 1-82 <BEN>
 A; Reference number: A; Accession: T09234
 submitted to the EMBL Data A; Reference number: 216624
 hypothetical protein 1 - Frankia alni
C;Specles: Frankia alni
C;Date: 20-Sep-1999 #sequence_revision
C;Accession: T09234
 밁
 A; Molecule type: DNA
A; Residues: 1-85 < RES>
 A; Molecule type: DNA
A; Residues: 1-85 <HO2>
 A; Experimental source:
 A; Cross-references:
 A; Status: translated
 RESULT
 A; Cross-references: EMBL: U18655;
 A; Status: preliminary; translated
 A; Accession:
 RESULT
 Status: nucleic acid sequence not
 Query Match
 17 NLDA 20
 Local
 10
 17
 1 NLDA 4
 NLDA
 A00283
 4.
 Similarity
 20
 Escherichia coli (strain K-12)
 100.0%; ilarity 100.0%; Conservative (
 EMBL:L29299; NID:g3953454; PID:g497433
ce: strain cpIl
 #sequence_revision
 from
 GB/EMBL/DDB
 Library,
 e sequence of Escherichia coli
MUID:97426617; PMID:9278503
 ; NID:g609323; PIDN:AAC43449.1; PID:g609325
G.; Bloch, C.A.; Perna, N.T.; Burland, V.;
Y.
 0
 from GB/EMBL/DDBJ
 Score 20; DB 2;
Pred. No. 2.3e+02;
; Mismatches 0;
 shown;
 November
 20-Sep-1999 #text_change
 translation not
 PIDN: AAA23936.1;
 Length 82;
 Holmgren,
 for
 gene
 shown
 determining the
 PID:g146273
 of.
 20-Sep-1999
 0,
 Escherichia
 Gaps
 Riley,
```

0;

mechanism

**X** 

coli.

```
E85595
hypothetical protein grxA [imported] - Escherichia coli (strain C;Species: Escherichia coli
C;Species: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change
C;Accession: E85595
C;Accession: E85595
 iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, & Nature 409, 529-533, 2001
 A; Title: Genome sequence of A; Reference number: A85480; A; Accession: E85595 A; Status: preliminary
 밁
 Ωy
 C; Superfamily: glutaredoxin; C; Keywords: redox-active disper; 11-14/Disulfide bonds: redox-
 DNA Res. 8, 11-22, 2001
A;Title: Complete genome sequence of enterohemorrhagic Escherichia
A:Reference number: A99629; MUID:21156231; PMID:11258796
 A;Description: the disulfide bond functions as an electron carrier in ion, it is also involved in reducing some disulfides in a coupled syst A;Pathway: deoxyribonucleotide biosynthesis C;Superfamily: glutaredoxin; glutaredoxin homology C;Keywords: deoxyribonucleotide biosynthesis; electron transfer; monom F;1-85/Domain: glutaredoxin homology G;UJT>
F;11-14/Disulfide bonds: redox-active #status experimental
 A;Cross-references: GB:BA000007; PIDN:BAB34352.1; A;Experimental source: strain O157:H7, substrain
 hypothetical protein ECs0929 [imported] - Escherichia coli (straC;Species: Escherichia coli C;Species: Bscherichia coli C;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change C;Accession: A99745
 Qy
 A;Status: preliminary
A;Molecule type: DNA
A;Residues: 'MRREI',1-15
 Biochemistry 30, 5475-5484, 1991
A;Title: Escherichia coli glutaredoxin: cloning and overexpression, thermodynamic stabi A;Reference number: A39568; MUID:91242463; PMID:2036416
A;Accession: A39568
 RESULT 13
 A;Gene: ECs0929
 C; Genetics:
 A; Molecule type: DNA
A; Residues: 1-85 <HAY>
 gasawara,
 R;Hayashi,
 В
 A;Status: preliminary
 A; Gene: grxA; grx
A; Map position: 1
 Query Match
Best Local
 ;Genetics:
 Query Match
Best Local
 Function:
 Matches
 Matches
 82 NLDA 85
 12
 82
 Local Similarity es 4; Conserv
 Local
 1 NLDA 4
 ۳
 , N.; Yasunaga,
8, 11-22, 2001
 NLDA
 NLDA 4
 T.;
 4;
 Similarity
 Makino, K.; Ohnishi, M.;
Masunaga, T.; Kuhara, S.;
 85
 19 min
 100.0%;
ilarity 100.0%;
Conservative (
 Conservative
 xin; glutaredoxin
disulfide
 redox-active #status predicted
 100.0%;
 redox-active #status experimental
 <SAN>
 enterohemorrhagic Escherichia
MUID:21074935; PMID:11206551
 .0%;
 0;
 0;
 Score 20;
Pred. No.
 Score 20;
Pred. No.
 Mismatches
 Mismatches
 Kurokawa, K.;
Shiba, T.; Hat
 homology
 ; Mau, b., .
A.; Dimalanta,
 2.4e+02;
 2.4e+02;
hes 0;
 DB 2;
 DB 1;
 PID:g13360388;
RIMD 0509952
 0,
 Hattori,
 Length 85;
 Length
 Glasner,
anta, E.;
 Ishii,
 coli (strain
 Indels
 Indels
 coli 0157:H7
 .
.
 85
 ×.;
 ; Yokoyama,
Shinagawa,
 O157:H7, substrain
 J.D.; Rose, Potamousis,
 30-Jun-2002
 30-Jun-2002
 0;
 GSPDB:GN00154
 0;
 monomer;
 system
 0157:н7,
 coli
 Gaps
 the
 O157:H7
 e glutathione-de
with glutathion
 redox-active
 F.J.
 substrain
 0;
 0;
 Han,

 .; Mayhew
Apodaca,

 and
 EDL9
 c.
 geno
 G
 ₩
 В
 Qγ
RESULT 16
 밁
 УŽ
 망
 Qy
```

```
A;Reference number: A38085; MUID:92235030; PMI.
A;Accession: A38085
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-88 <MEN>
C;Superfamily: S-layer glycoprotein
C;Keywords: glycoprotein
 C; Geneti
A; Gene:
 hypothetical protein RC0253 [imported] c;Species: Rickettsia conorii C;Date: 30-Sep-2001 #sequence_revision C;Accession: E97731
 RESULT
E97731
 S-layer glycoprotein - Haloferax volcar
C;Species: Haloferax volcanii
C;Date: 19-May-1994 #sequence_revision
C;Accession: A38085
R;Mengele, R.; Sumper, M.
 A;Molecule type: DNA
A;Residues: 1-85 <ST00.
A;Cross-references: GB:AE005174; NID:g12513864; PIDN:AAG55225.1; GSPDB:GN00145; UWGP:A;Experimental source: strain 0157:H7, substrain EDL933
C;Genetics:
C;Genetics:
A;Gene: grax
C;Superfamily: glutaredoxin; glutaredoxin homology
C;Keywords: redox-active disulfide
C;Keywords: redox-active disulfide
C;Keywords: redox-active #ptatus predicted
 A; Molecule type: DNA
A; Residues: 1-89 < KUI
 A;Title: Mechanisms of Evolution in Rickettsia conorii A;Reference number: A97700; MUID:21442074; PMID:1155789 A;Accession: E97731
 R;Ogata, H.; Audic, S.;
Science 293, 2093-2098,
 A; Cross-references:
 R;Mengele, R.; Sumper, M.
J. Biol. Chem. 267, 8182-8185
A;Title: Drastic differences
 RESULT
A38085
 A;Status:
 Query Match
Best Local S
Matches 4
 Genetics:
Gene: RC0253
 Query Match
Best Local S
Matches 4
 Matches
 Query Match
 Best
ω
5
 15
 Local
 14
 82
 1 NLDA 4
 N
 μ.
 L
 Chem.
NLDA
 NLDA
 NLDA
 preliminary
 NLDA 4
 NLDA
 4;
 Similarity
 Similarity
 Similarity 4; Conserv
38
 4
 85
 ilarity 100.
Conservative
 <KUR>
 Conservative
 Conservative
 s.;
 GB:AE006914;
 8182-8185, 1992
 Haloferax volcanii (fragments)
 2001
 Renesto-Audiffren,
 100.0%;
 100.0%;
 MUID:21442074; PMID:11557893
 .0%;
 PIDN:AAL02791.1;
 0;
 0;
 0;
 Score 20; DB
Pred. No. 2.5
); Mismatches
 Score
 Pred.
 Score 20;
 Mismatches
 Mismatches
 7 Rickettsia conorii (strain Malish
 30-Sep-2001 #text_change
 19-May-1994 #text_change
 No.;
 No.
 ₽.;
 ion of related PMID:1569073
 2.4e+02;
 DB 2;
2.5e+02;
 2.4e+02
 DB
 DB 2;
 Fournier, P.E.;
 PID:g15619308;
 0;
 0;
 0,
 Length
 Length 88
 Length
 and
 Indels
 Indels
 Indels
 S-layer
 Rickettsia
 85
 Barbe,
 30-Sep-2001
 04-Sep-1998
 0;
 GSPDB: GN00173
 glycoproteins
 0;
 0;
 Gaps
 Gaps
 prowazekii
 V.; Samson,
 0;
 0
 0
 from
 D.;
```

```
C;Accession: C69973; T44775.
C;Accession: C69973; T44775.
C;Accession: C69973; T44775.
C;Accession: C69973; T44775.
C; Bron, S; Brouillet, S; Bruschi, C.V.; Caldwell, B.; Capuano, V.; Carter, N.M.; Cha, Ehrlich, S.D.; Emmerson, P.T.; Entian, K.D.; Errington, J.; Fabret, C.; Ferrari, E. Nature 390, 249-256, 1997
A;Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Galler iech, J.; Harwood, C.R.; Henaut, A.; Hilbert, H.; Holsappel, S.; Hosono, S.; Hullo, M.F. Koetter, P.; Koningstein, G.; Krogh, S.; Kumano, M.; Kurita, K.; Lapidus, A.; Lardinois, A;Authors: Lauber, J.; Lazarevic, V.; Lee, S.M.; Evine, A.; Liu, H.; Masuda, S.; Maueel Y, M.; Ogawa, K.; Ogiwara, A.; Oudega, B.; Park, S.H.; Parro, V.; Pohl, T.M.; Portetelle Rieger, M.; Rivolta, C.; Rocha, E.; Roche, B.; Rose, M.; Sadaie, Y.; Sato, T.; Scanlon, A; Tanakoshi, A.; Yamamoto, H.; Yamane, K.; Yasumoto, K.; Yata, K.; Yoshida, K.; Aitle: The complete genome sequence of the Gramm-postitive bacterium Bacillus subtilis. A; Rocession: C69973
A:Status: nucleic acid sequence not shown: translation not shown
 A;Title: Barnase and barstar. Expression of its cloned inhibitor A;Reference number: S01372; MUID:89012012; PMID:3050134 A;Accession: S01373 A;Accession: S01373
 A;Title: An lrp-like gene of Bacillus subtilis involved A;Reference number: Z22837; MUID:97431495; PMID:9287000 A;Accession: T44775
 A;Cross-references: Error C;Superfamily: Bacillus
 N;Alternate names: barstar
C;Species: Bacillus amyloliquefaciens
C;Date: 10-Sep_1999 #sequence_revision
 Ş
 A;Experimental source: strain 168
R;Belitsky, B.R.; Gustafsson, M.C.U.; Sonenshein, A.L.;
J. Bacteriol. 179, 5448-5457, 1997
 밁
 ş
 A; Experimental source: strain
 ribonuclease inhibitor homolog yrdF -
 ribonuclease inhibitor - Bacillus amyloliquefaciens
 Species: Bacillus subtilis
Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change
 Molecule type: DNA
Residues: 1-90 <HAR>
 Accession:
 Superfamily:
 Cross-references: EMBL: X11043; NID: g1926275; PIDN: CAA71938.1; PID: g1926279
 Status: translated from GB/EMBL/DDBJ
 Status: nucleic acid sequence not shown; translation not shown
 Query Match
 Cross-references: EMBL:X15545; NID:g1155006; Superfamily: Bacillus ribonuclease inhibitor
 Matches
 Cross-references: GB:Z99117; GB:AL009126; NID:g2634966; PIDN:CAB14614.1; PID:g2635118
 Molecule type: DNA Residues: 1-91 <KUN>
 34
 Local Similarity
 Local Similarity
 1 NLDA 4
 1-91 <BEL>
 S01373
 37
 Bacillus
 Conservative
 ribonuclease inhibitor
 100.0%;
 100.0%;
 0,
 0;
 Score 20; DB 1;
Pred. No. 2.5e+02;
 Score 20; DB 1;
Pred. No. 2.5e+02;
; Mismatches 0;
 Mismatches
 Bacillus subtilis
 10-Sep-1999 #text_change 10-Sep-1999
 PIDN:CAA33551.1;
 Length 91;
 Length 90
 Indels
 in
 von Wachenfeldt,
 branched-chain amino acid
 21-Jul-2000
 PID: g39312
 0;
 0;
 permits expression
 Gaps
 Gaps
 <u>.</u>
 0
 0
 ţ
 C; Geneti
A; Gene:
 calgranulin
C;Species: S
 RESULT
ABO449
 20
 밁
 밁
 В
 50
A; Reference number: AB0001; A; Accession: AB0449
 Matches
 Query Match
Best Local
 Matches
 Genetics:
 20
 19
 34
 34
 CAC0844
 NLDA
 NLDA 4
 NLDA
 O
O
 4;
```

```
probable ribonuclease inhibitor YPO3690 [imported] - Yersinia pestis (strain CO92) C;Species: Yersinia pestis
C;Species: Yersinia pestis
C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 02-Nov-2001
C;Accession: AB0449
R;Parkhill, J; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, ideno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, (deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, (il, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barrel Nature 413, 523-527, 2001
 R;NOlling, J.; Breton, G.; Omelchenko, M.V.; Markarova, K.S.; Zeng, Q.; Gibson, R.; IDaly, M.J.; Bennett, G.N.; Koonin, E.V.; Smith, D.R.
J. Bacteriol. 183, 4823-4838, 2001
A;Title: Genome Sequence and Comparative Analysis of the Solvent-Producing Bacterium A;Reference number: A96900; MUID:21359325; PMID:21359325
A;Accession: A97004
 C;Superfamily: S-100 protein; calmodulin repeat homology C;Keywords: calcium binding; EF hand F;48-80/Domain: calmodulin repeat homology <EF2>
 J. Biol. Chem. 2007, 2007
A;Title: Primary structure and
A;Title: Primary structure and
A;Title: Primary structure and
A;Title: Primary structure and
 C:Species: Sus scrofa domestica (domestic pig)
C:Date: 10-Feb-1995 #sequence_revision 10-Feb-1995 #text_change 23-May-1997
C:Accession: A55406
 A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-91 <KUR>
 C:Date: 14-Sep-2001 #sequence_revision 14-Sep-2001 #text_change 14-Sep-2001
C:Accession: A97004
 barstar-like protein ribonuclease (barnase) inhibitor [imported] - Clostridium
C; Species: Clostridium acetobutylicum
 A; Reference number: A; Accession: A55406
 A; Molecule type: protein A; Residues: 1-91
 R;Dell'Angelica, E.C.; Schleiche J. Biol. Chem. 269, 28929-28936,
A; Title: Genome sequence of Yersinia pestis, A; Reference number: AB0001; MUID:21470413; F
 A;Cross-references: GB:AE001437; PIDN:AAK78820.1; A;Experimental source: Clostridium acetobutylicum
 A; Status: preliminary
 Query Match
Best Local Similarity
 59 NLDA 62
 1 NLDA 4
 Similarity
 100.0%; ilarity 100.0%; Conservative
 Conservative
 Schleicher, C.H.; Santome, J.A. 929-28936, 1994
 100.0%;
 and binding properties of calgranulin MUID:95050708; PMID:7961855
 0,
 0.
 Score 20; DE
Pred. No. 2.5
0; Mismatches
 Score 20; DB 2;
Pred. No. 2.5e+02;
 Mismatches
 the causative agent of plague
PMID:11586360
 DB 2;
,. 2.5e+02;
0;
 PID:g15023737;
ATCC824
 Length 91
 Length 91;
 Indels
 0,
 GSPDB:GN00168
 0;
 O
 Gaps
 Gaps
 novel
 0
 0
```

```
C;Accession: A37483; MUID:95332330; PMID:7608189
Db
 Ω
 3-mercaptopyruvate sulfurtransferase (EC 2.8.1.2) - C;Species: Rattus norvegicus (Norway rat) C;Date: 05-Jan-1996 #sequence_revision 05-Jan-1996 #C;Accession: A57483
 A; Molecule type: protein A; Residues: 1-96 < NAG>
 Hickey, E.K.; Haft, D.H.; Salzberg, S.L.; White, O.; Fleischmann, R.D.; II, Woln, H.; Vanathevan, J.; Gill, J.; Scarlato, V.; Masignani, V.; Science 287, 1809-1815, 2000
A; Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; A; Title: Complete genome sequence of Neisseria meningitidis serogroup B A; Reference number: A81000; MUID:20175755; PMID:10710307
A; Accession: A81176
A; Status: preliminary
 C; Superfamily: thiosulfate sulfurtransferase
 C:Species: Neisseria meningitidis
C:Date: 31-Mar-2000 #sequence_revision
C:Accession: A81176
 밁
 δÃ
 A; Experimental source: C; Genetics:
 A;Cross-references: GB:AE002419;
A;Experimental source: serogroup
 A; Molecule type: DNA
A; Residues: 1-95 < TE
 R;Tettelin, H.; Saunders, N.J.; Heidelberg, J.; Jeffries, A.C.; Nelson, K.E.; Hickey, E.K.; Haft, D.H.; Salzberg, S.L.; White, O.; Fleischmann, R.D.; Dougheri, H.; Vamathevan, J.; Gill, J.; Scarlato, V.; Masignani, V.; Pizza,
 ribonuclease inhibitor barstar NMB0646 [imported] - Neisseria meningitidis
 밁
 γ
 A;Cross-references:
C;Genetics:
 A; Molecule type:
A; Residues: 1-93
 A; Gene:
 Query Match
Best Local S
Matches 4
 Query Match
Best Local
 77/Active site: Cys (cysteine persulfide intermediate) #status
 Matches
 Keywords: sulfurtransferase
 Query Match
Best Local
 \omega
 Local Similarity
 22
 -ب
 21
 34 NLDA
 1 NLDA 4
 NMB0646
 μ
 YP03690
NLDA
 NLDA 4
 NLDA 36
 NLDA 4
 4.
 Similarity 4; Conserv
 Similarity
 37
 >KUR>
 Conservative
 <TET>
 Conservative
 Conservative
 GB:AL590842;
 100.0%;
 100.0%;
 100.0%;
 0;
 0;
 GB:AE002098; NID:g7225863; PIDN:AAF41067.1; PID:g72258 B, strain MC58
 0;
 PIDN:CAC93158.1;
 Score 20; DB Pred. No. 2.6
 Pred.
 Score 20;
 Pred. No.
 Score 20;
 Mismatches
 Mismatches
 31-Mar-2000 #text_change 19-Jan-2001
 No.
 2.7e+02;
hes 0;
 2.6e+02;
 DB 2;
2.6e+02;
 DB 2;
 PID:g15981608; GSPDB:GN00175
 #text_change 19-Jan-2001
 0;
 0;
 rat (fragment)
 Length 96;
 Length 95,
 Length
 Indels
 Indels
 Indels
 0;
 predicted
 0;
 0,
 Gaps
 Gaps
 Gaps
 Dougherty, Pizza, M.
 strain MC58
 Rappuoli, R.;
 (strain
 0;
 0;
 0;
 Eisen,
 Ħ
 MC58
```

```
gasawara, N.; Yasunaga, 7
DNA Res. 8, 11-22, 2001
A; Title: Complete genome
 C; Geneti
A; Gene:
 hypothetical protein ECs2757 [imported]|-C;Species: Escherichia coli
C;Date: 18-Jul-2001 #sequence_revision 18-
 A; Molecule type: I
A; Residues: 1-103
 рЬ
 A; Status: preliminary
 A; Accession: E90973
 A; Reference number:
 R;Hayashi,
 C; Accession:
 δÃ
 A;Cross-references: GB:AE005174; NID:g12516136; PIDN:AAG57029.1; A;Experimental source: strain O157:H7, substrain EDL933
 A; Molecule type: DNA
A; Residues: 1-103 <S
 A;Title: Genome sequence of enterohemorrhagic Escherichia A;Reference number: A85480; MUID:21074935; PMID:11206551 A;Accession: A85821
 C;Species: Escherichia coli
C;Date: 16-Feb-2001 #sequence_revision
C;Accession: A85821
 A; Experimental C; Genetical
 E90973
 A;Status: preliminary
 iller, L.; Grotbeck, E.J.;
Nature 409, 529-533, 2001
 멍
 δÃ
 R; Perna, N.T.; Plunkett III, G.; Burland,
 unknown protein
 A;Title: Complete genome sequence of the alkaliphilic bacterium A;Reference number: A83650; MUID:20512582; PMID:11058132 A;Accession: C84003
 C; Accession: C84003
R; Takami, H.; Nakas
Nucleic Acids Res.
 C;Species: Bacillus halodurans
C;Date: 01-Dec_2000 #sequence_revision |01-Dec-2000
 A;Gene:
 A;Cross-references: GB:AP001516; GB:BA000004; NID:g10175192; PIDN:BAB06546.1; GSPDB:GA;Experimental source: strain C-125
 A; Molecule type: DNA
A; Residues: 1-102 <STO>
 exogenous DNA-binding protein comGC [imported] - Bacillus halodurans (strain
 A; Status: preliminary
 Matches
 Query Match
Best Local (
 Genetics
 Matches
 Query Match
Best Local
 59 NLDA
 24
 70
 23
 references:
 Ļ
 1 NLDA 4
 Z3120
 COMGC
 NLDA 4
 T.,
 NLDA 73
 1-103 <STO>
 E90973
 4;
 Similarity
 Similarity
 Makino, K.; Ohnishi,
Yasunaga, T.; Kuhara,
 62
 Nakasone, K.; Takaki, Y.; Maeno, Res. 28, 4317-4331, 2000
 encoded within prophage CP-933U [imported] -
 Conservative
 Conservative
 <HAY>
 A99629; MUID:2
 GB:BA000007;
 100.0%;
 100.0%;
 Davis,
 uence of enterohemorrhagic Escherichia
MUID:21156231; PMID:11258796
 PIDN:BAB36180.1;
 0;
 0;
 Burland, V.; Mau, B.; Glasner, N.W.; Lim, A.; Dimalanta, E.;
 Score 20; I
Pred. No. 2.
 Score
Pred.
 M.; |Kurokawa, I
S.; |Shiba, T.;
 Mismatches
 Mismatches
 18-Jul-2001
 16-Feb-2001
 No.
 Escherichia coli (strain
 ν.
 3.9e+02;
s 0;
 DВ
 DB
 ດ
: ;
 8e+02;
 , K.; Ishii
.; Hattori,
 2
 2
PID:g13362225; GSPDB:GN00154
 #text_change
 #text_change
 Sasaki,
 #text_change 15-Jun-2001
 Length 103
 Ishii,
 Length 102;
 Indels
 Indels
 coli 0157:H7
 ₽.;
 ×
:
 Escherichia coli
 ; Yokoyama,
Shinagawa,
 18-Jul-2001
 Masui,
 J.D.; Rose,
 Bacillus halodurans
 Potamousis,
 GSPDB:GN00145;
 0;
 0,
 coli 0157:H7
 O157:H7,
 Gaps
 Gaps
 Fuji,
 substrain
 0,
 0,
 C-125)
 Han,
 (strain
 and
 UWGP
 Ή
;
 ۵
 a
 \Xi
```

```
A; Experimental source: C; Genetics: A; Gene: ECs2757
 awa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki DNA Res. 6, 83-101, 1999
A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, A;Reference number: A72450; MUID:99310339; PMID:10382966
 RESULT
E72664
 A;Map position: 9L
C;Superfamily: maltose transport protein MAL61
C;Reywords: transmembrane protein
C;Reywords: transmembrane #status predicte
 R;Lye, G.; Bowman, S.; Churcher, C. submitted to the EMBL Data Library, A;Reference number: S50349
 sugar transport protein truncated homolog YIL171w-
N;Alternate names: hypothetical protein YI9402.06A
C;Species: Saccharomyces cerevisiae
C;Date: 13-Jan-1995 #sequence_revision 10-Feb-1995 #
 밁
 밁
 A; Molecule type: DNA
A; Residues: 1-109 <LYE>
 В
 Š
 A; Molecule type: DNA
A; Residues: 1-103 <KAW>
A; Cross-references: DDB
 hypothetical protein APE0740 - Aeropyru C;Species: Aeropyrum pernix C;Date: 20-Aug-1999 #sequence_revision C;Accession: £72664
 Ş
 ş
 A; Cross-references:
 A;Gene: SGD:HXT12; MIPS:YIL171w
 A;Cross-references: GB:247047; EMBL:Z46921; GSPDB:GN00009; MIPS:YIL171w; NID:g603997;
 A; Accession: S50356
 A; Gene: APE0740
 A; Experimental
 A; Status: preliminary
 A; Reference number: A; Accession: E72664
 R;Kawarabayasi,
 Matches
 Query Match
Best Local Similarity
 Genetics:
 Accession: S50356
 Query Match
 Genetics
 Matches
 Query Match
 Matches
 26
 59
 3
 Local Similarity
les 4; Conserv
 40
 Local Similarity
 _
 1 NLDA 4
 1 NLDA 4
 NLDA 43
 NLDA 4
 NLDA
 NLDA 46
 4.
 62
 source:
 Y.; Hino, Y.;
 transmembrane #status predicted <TMM>
 Conservative
 Conservative
 Conservative
 DDBJ:AP000060; NID:g5104188; PIDN:BAA79717.1; PID:d1043503; PID:g51ce: strain K1
 SGD: S0001433
 strain O157:H7, substrain RIMD 0509952
 100.0%;
 100.0%;
 100
 .0%;
 Horikawa, H.; Ya
, S.; Funahashi,
 Aeropyrum pernix (strain
 0;
 0;
 0
 Score 20;
Pred. No.
 Score 20;
Pred. No.
 Pred. No. 3e
; Mismatches
 Score 20;
 December 1994
 Mismatches
 Mismatches
 20-Aug-1999 #text_change 20-Aug-1999
 Yamazaki, S.;
i, T.; Tanaka,
 ; DB 2; I
. 2.9e+02;
 DB 2; 1
2.9e+02;
 3e+02;
 DB 2;
 0
 #text_change 19-Apr-2002
 0
 yeast (Saccharomyces cerevisiae)
 Length 103;
 Length 109;
 Length 103
 Indels
 Indels
 Indels
 Haikawa, Y.;
 0;
 0,
 0;
 Gaps
 Gaps
 Gaps
 Jin-no,
 In-no, K.;
Yamazaki,
 0;
 0;
 0;
 Aeropy
 J.;
 Taka
 ס
RESULT
AG0725
 덩
```

```
A; Resiques: 1 116 GB: AE001886; A; Cross-references: GB: AE001886; AE
 R; White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, S.; Smith, H.O.; Venter, J.C.; Fraser, C.M. Science 286, 1571-1577, 1999
A; Title: Genome sequence of the radioresistant bacte A; Reference number: A75250; MUID:20036896; PMID:1056
 conserved hypothetical protein - Deinococcus radiodurans (strain
C;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change ?
 δÃ
 A; Note: YLR154
C; Superfamily:
 A;Cross-references: SGD:S0004144
A;Map position: 12R
 A;Title: ACS2, a Saccharomyces cerevisiae A;Reference number: S66534; MUID:95377302; A;Accession: S66535
 R;van den Berg, M.A.; Steensma, Eur. J. Blochem. 231, 704-713,
 A; Reference number: A; Accession: S65003
 submitted to the Protein Sequence A; Reference number: S64987
 C;Species: Saccharomyces cerevisiae
C;Date: 01-Aug-1995 #sequence_revision 24-N
C;Accession: S65003; S66535
R;Rieger, M.; Mueller-Auer, S.; Brueckner,
 hypothetical protein YLR154c - yeast (Saccharomyces N;Alternate names: hypothetical protein L3341
 Qγ
 A; Map position: 1
C; Superfamily: My
 밁
 A; Map position:
 A; Molecule type: DNA
A; Residues: 1-110 <VAN>
 A; Status: translation not
 A; Molecule type: DNA
A; Residues: 1-112 <WHI>
 A;Cross-references: EMBL:S79456; NID:g1168013; PIDN:AAB35144.1;
 A; Experimental source: strain S288C
 A;Cross-references: EMBL:Z73326; NID:g1360587; PIDN:CAA97726.1;
 A; Residues:
 A; Molecule type: DNA
 RESULT
 A; Gene: DR0242
 A; Status: preliminary
 A;Reference number:
A;Accession: A75544
 Accession: A75544
 Genetics
 Genetics
 Query Match
Best Local
 Matches
 Query Match
 Local
86 NLDA
 1 NLDA 4
 7
 1 NLDA 4
 NLDA
 1-110 <RIE>
 Similarity
 Similarity
89
 10
 Mycobacterium tuberculosis
 Saccharomyces hypothetical protein YLR154c
 Conservative
 100.0%;
 100.0%;
 shown
 the radioresistant bacterium Deinococcus radiodurans MUID:20036896; PMID:10567266
 , н.ү.
1995
 0;
 0,
 GB:AE000513; NID:g6457921; PIDN:AAF09825.1; PID:g645
 Score 20;
Pred. No.
 Score 20; DB
Pred. No. 3.1
0; Mismatches
 Database,
 03-Dec-1999 #text_change 15-Sep-2000
 24-May-1996
 gene encoding; PMID:7649171
 hypothetical
 :
 мау
 3.1e+02;
 3.1e+02;
 DB 2;
 DB 2;
 0;
 #text_change 19-Apr-2002
 E.K.; Peterson,
, L.; Utterback,
 cerevisiae)
 Length 112;
 Length 110;
 protein
 acetyl-coenzyme A synthetase
 PID: g1683551
 PID:g1360588;
 0;
 0
 J.D.;
T.; Za
 Gaps
 Gaps
 zalewski,
 0
 0
 MIPS:YL
```

C 20

30

```
hypothetical protein [imported] - Staphylococcus aureus (strain N315) C;Species: Staphylococcus aureus (c;Species: Staphylococcus aureus C;Date: 110-May-2001 **sequence_revision 10-May-2001 **text_change 22-Oct-2001 C;Accession: H89785 R;Kuroda, M.; Ohta, T.; Uchiyama, I.; Baba, T.; Yuzawa, H.; Kobayashi, I.; Oma, A.; Mizutani-Ui, Y.; Kobayashi, N.; Sawano, T.; Inoue, R.; Kaito, C.; St. C.; Shiba, T.; Hattori, M.; Ogasawara, N.; Hayashi, H.; Hiramatsu, K. C.; St. C.; Shiba, T.; Hattori, M.; Ogasawara, N.; Hayashi, H.; Hiramatsu, K. A;Title: Whole genome sequencing of meticillin-resistant Stapylococcus aureu A;Reference number: A89758; MUID:21311952; PMID:11418146
 Nature 413, 848-852, 2001
A;Authors: Parry, C.; Quail, M.; Rutherford, K.;
A;Title: Complete genome sequence of a multiple (
 C; >
 conserved hypothetical protein YPO2070 [imported] - Yersinia pestis (strain C;Species: Yersinia pestis
C;Species: Yersinia pestis
C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 01-Feb-2002
C;Accession: AF0252
R;Parkhill, J.; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Pu
 conserved hypothetical protein STX1952 [imported] - Salmonella enterica subsp. C;Species: Salmonella enterica subsp. enterica serovar Typhi A;Note: this species has also been called Salmonella typhi C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 31-Dec-2001 C;Accession: AG0725
 A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-114 <KUR>
 A;Title: Genome sequence of Yersinia pestis, the causative A;Reference number: AB0001; MUID:21470413; PMID:11586360 A;Accession: AF0252
 R;Parkhill, J.; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, il, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barre, Mature 413, 523-527, 2001
 RESULT
AF0252
 A;Gene: STY1952
C;Superfamily: hypothetical protein HI0719
 밁
 Š
 A;Cross-references: GB:AL590842; PIDN:CAC90882.1; C;Genetics:
 ρ
 R;Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, J.; Churcher th, T.; Connerton, P.; Cronin, A.; Davis, P.; Davies, R.M.; Dowd, L.; White, N.; Farrar
 В
 C; Genetics:
 A; Cross-references: GB: AL513382; PIDN: CAD05505.1;
 A; Molecule type: DNA
A; Residues: 1-114 <PAR>
 A;Status: preliminary
 A; Reference number: AB0502; A; Accession: AG0725
 Query Match
Best Local S
Matches 4
 Query Match
Best Local :
 Superfamily:
 Matches
 Gene:
 T.; Connerton, P.; C.
S.; O'Gaora,
 30
 30 NLDA 33
 Local
 YP02070
 NLDA 4
 NLDA
 NLDA 4
 4;
 Similarity
 Similarity
 ω
 hypothetical protein HI0719
 100.0%; ilarity 100.0%; Conservative (
 Conservative
 100.0%; Score 20; D
100.0%; Pred. No. 3.
Live 0; Mismatches
 0;
 Score 20;
Pred. No.
 Mismatches
 . 3.2e+02;
ches 0;
 DB 2;]
3.2e+02;
 DB
 ; Simmonds, M.; drug resistant
 2
 PID:g15980081;
 PID:g16503009; GSPDB:GN00176
 Length 114;
 Length 114;
 Indels
 agent of plague
 Skelton, J.;
Salmonella e
 GSPDB:GN00175
 0;
 0,
 Gaps
 Gaps
 I.; Cui,
 enterica
 Sekimizu,
 CO92)
 Stevens,
 0;
 0;
 enterica
 Barrell,
 sero
 G. M
 Oguc
K.;
 7
 RESULT
T45512
 RESULT
D32227
 밁
 QΥ
 A; Gene:
 밁
 Q
 밁
 Q
```

```
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-114 <KUR>
A;Cross-references: GB:BA000018; PID:gl3700144; PIDN:BAB41443.1; GSPDB:GN00149
A;Experimental source: strain N315
C;Genetics:
 R:Wang, Y.; Moore, M.; Levinson, H.S.; Silver, S.; Wals
J. Bacteriol. 171, 83-92, 1989
A;Title: Nucleotide sequence of a chromosomal mercury r
A;Reference number: A32227; MUID:89123092; PMID:2536669
A;Accession: D32227
 A;Cross-references: EMBL:AB024961; PIDN:BAA86116.1
A;Experimental source: isolate Mersaru |
 A; Reference number:
 C;Accession: T44504
R;Narita, M.; Koizumi, T.; Huang, C.; Endc submitted to the EMBL Data Library, March
 merP protein [imported] - Clostridium butyricum
C;Species: Clostridium butyricum
C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2
 A;Residues: 1-115 <WAN>
A;Cross-references: GB:M22708; NID:g143188; PIDN:AAA83976.1; PID:g1129096
 A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-115 <WAN>
 C;Species: Bacillus sp.
C;Date: 08-Sep-1989 #sequence_revision |08-Sep-1989
C;Accession: D32227
 A; Gene: SA0221
 A; Residues:
 A; Molecule type: DNA
 A; Status: preliminary; translated
 A; Description: Broad-spectrum mercury
 hypothetical protein 4 (mer operon) -
 Query Match
Best Local (
 Matches
 Genetics:
 Matches
 Query Match
Best Local :
 Query Match
Best Local :
 Matches
100 NLDA
 99 NLDA 102
 Local Similarity
 63 NLDA
 Local Similarity
 merP
 1 NLDA 4
 1 NLDA 4
 1 NLDA 4
 1-116 <NAR>
 Similarity 4; Conser
 4;
103
 66
 Conservative
 Conservative
 222785
 100.0%;
 100.0%;
 100.0%;
 of a chromosomal mercury resistance
 0;
 0;
 0;
 Score 20;
Pred. No.
 from
 Score
Pred.
 Score
Pred.
 Mismatches
 Mismatches
 Mismatches
 Endo,
 résistance
 Bacillus
 GB/EMBL/DDBJ
 21-Jan-2000
 20;
No.
 NO;
 1999
 <u>م</u>
 DB 2;
3.2e+02;
 3.2e+02
 DВ
 DB 2;
 .3e+02;
 gp
 and
 2;
 Walsh,
 #text_change 15-Oct-1999
 #text_change
 Length 115;
 its
 Length 116;
 Length 114
 Indels
 Indels
 genetic
 c.;
 Mahler,
 21-Jan-2000
 characterization
 determinant
 0
 ;0
 0;
 Gaps
 Gaps
 Gaps
 0
 0;
 from
 0;
```

Ω

of.

```
R;Tomb, J.F.; White, O.; Kerlavage, A.R.; Clayton, R.A.; Sutton, G.G.; Fleischmann, R Peterson, S.; Loftus, B.; Richardson, D.; Dodson, R.; Khalak, H.G.; Glodek, A.; McKeson, J.D.; Kelley, J.M.; Cotton, M.D.; Weidman, J.M.; Fujii, C.; Bowman, C.; Watthey,
 C;Species: Helicobacter pylori
C;Date: 09-Aug-1997 #sequence_revision
 밁
 Ş
 C; Accession: T45512
R; Bogdanova, E.S.; Bass, I.A.; Minhakhin, I
Microbiology 144, 609-620, 1998
A; Title: Horizontal spread of mer operons a
A; Reference number: Z22993; MUID: 98195721;
 probable transport protein orf4 [imported] - Exiguobacterium sp. plasmid C;Species: Exiquobacterium sp.
R;Takami, H.; Nakasone, K.; Takaki
Nucleic Acids Res. 28, 4317-4331,
A;Title: Complete genome sequence
A;Reference number: A83650; MUID:
A;Accession: F83714
A;Status: preliminary
 holo-(acyl carrier protein) synthase BH0518 [imported] - Bacillus halodurans C;Species: Bacillus halodurans C;Decies: Bacillus halodurans C;Date: 01-Dec-2000 #sequence_revision 01-Dec-2000 #text_change 15-Jun-2001 C;Accession: F83714
 RESULT
F83714
 밁
 Ş
 A; Molecule type: DNA
A; Residues: 1-116 < TOM>
 A; Genome: plant A; Note: ORF4
 A; Experimental C; Genetics:
 A; Start codon:
 A; Cross-references:
 A; Authors: Wallin, E.; Hayes, W.S.; Borodovsky, M.; Karpk, P.D.; A; Title: The complete genome sequence of the gastric pathogen He A; Reference number: A64520; MUID:97394467; PMID:9252185
 Nature 388, 539-547, A; Authors: Wallin, E
 hypothetical
 A; Description:
 A; Reference number:
A; Accession: T45512
A; Status: prelimina
 A; Status: preliminary; nucleic acid sequence not shown;
 A; Cross-references:
 A; Molecule type: DNA
A; Residues: 1-116 <BOG>
 ;Species: Exiguobacterium sp.;Date: 31-Jan-2000;Date: 31-Jan-2000
 Genetics:
 Accession: C64562
 Matches
 Query Match
Best Local
 Accession: C64562
 Matches
 Query Match
Best Local
 Function:
 Status: preliminary; translated
 100 NLDA 103
 37
 36
 54
 Local
 ب
 Н
 NLDA 4
 NLDA
 NLDA 4
 plasmid pKLH3
 4;
 Similarity
 protein HP0339
 Similarity
 GIG
 57
 phage T4 lysozyme homology
: phage T4 lysozyme homolog
 may
 source: strain
 Conservative
 Conservative
 be
 GB: AE000551;
 EMBL:X99457; NID:g3413183; PIDN:CAA67821.1; PID:g3413187
se: strain TC38-2b
 1997
 involved in
 K.; Takaki,
 100.0%;
 100.0%;
 - Helicobacter pylori (strain 26695)
 quence of the alkaliphilic bacterium MUID:20512582; PMID:11058132
 GB:AE000511;
 0
 0,
 homology
 Score 20;
Pred. No.
 mercury
 from
 Score 20;
Pred. No.
 Y.; Maeno,
 Mismatches
 Mismatches
 09-Aug-1997
 GB/EMBL/DDBJ
 L.S.;
 among Gram-positive; PMID:9534232
 resistance
 <T4L>
 3.3e+02;
 3.3e+02;
 DB
 NID:g2313430;
 В
 ត
: ;
 Petrova,
 2
 Ŋ
 #text_change 08-Oct-1999
 #text_change
 Sasaki,
 Length 116
 Length 116
 Indels
 translation not
 м. А.;
 R
::
 PIDN:AAD07411.1; PID:g23134
 Helicobacter
 bacteria
 Masui, N.;
 Mindlin,
 21-Jul-2000
 Bacillus
 Smith,
 0;
 0;
 Gaps
 Gaps
 in natural enviro
 H.O.;
 S.Z.;
 halodurans
 Fuji,
 pylori
 (strain
 0
 0,
 Fraser,
 Volodin,
 Ŧ
 McKenn
 and
 Hir
 R.D
 Ġ
 a
 ۲
 A; Gene
A; Map
 Qy
 Ş
 밁
 В
 ρ
 맑
```

```
A; Atotus: preim...
A; Status: preim...
A; Molecule type: DNA
A; Molecule type: DNA
A; Molecule type: NA
A; Molecule type: NA
A; Molecule type: NA
A; Molecule type: NA
A; Status: preim...
A; Molecule type: DNA
A; Molecule type: DNA
A; Molecule type: GB; AE007870;
 A; Molecule type: DNA
A; Residues: 1-119 <STO>
A; Cross-references: GB:AP001508; GB:BA000004;
A; Experimental source: strain C-125
C; Genetics:
 A; Title: Genome Sequence
A; Reference number: A9735
A; Accession: C98286
 hypothetical protein AGR_L_2486 [imported] C;Species: Agrobacterium tumefaciens C;Date: 22-Oct-2001 #sequence_revision 22-Oct-2001
 A; Title: The complete amino acid sequence (A; Reference number: S55326; MUID:95289994; A; Accession: S55326
 R;Chan, C.; Willis, A.C.; Robinson, Biochem. J. 308, 585-590, 1995
 C;Species: Thiosphaera pantotropha C;Date: 19-Mar-1997 #sequence_revision
 A; Gene: BH0518
C; Superfamily:
 A.; Liu, F.; Wollam, C.; Al
Science 294, 2323-2328, 2001
 A; Molecule type: protein A; Residues: 1-123 < CHA>
 C; Accession:
 pseudoazurin - Thiosphaera pantotropha
N;Alternate names: blue copper protein
 C; Accession:
 Query Ma
Best Loc
Matches
 Query
Best I
 Goodner,
 Matches
 Matches
 Query Match
 position:
 39
 Local
 38
 Local
 86
 92 NLDA
 Local
 AGR
1 NLDA 4
 1 NLDA 4
 1 NLDA 4
 NLDA
 B.; Hinkle, G.; Gattung, F.; Wollam, C.; Allinger,
 _L_2486
 S55326
 Similarity
 C98286
 Similarity
 Similarity
 101
 holo-ACP
 linear
 Conservative
 Conservative
 Conservative
 luence of A97359;
 chromosome
 synthase
 100.0%;
 100.0%;
 100.0%;
 the Plant Pathogen PMID:11743194
 0;
 0
 PIDN: AAK89813.1;
 0
 Score 20; DB Pred. No. 3.3); Mismatches
 Score 20; DE Pred. No. 3.5); Mismatches
 Score 20; DE Pred. No. 3.5); Mismatches
 . . .
 C.V.; Aplin, R.T.; Radford,
 22-Oct-2001
 19-Mar-1997 #text_change 20-Apr-2000
 Miller,
 Doughty,
 20;
 confirms the PMID:7772045
 3.5e+02
 3.3e+02
 Agrobacterium tumefaciens
 ມB 2;
3.5e+02;
0;
 DВ
 NID: g10172890; PIDN: BAB04237.1;
 BG
 and
 Z, Z.;
 2;
 2;
 PID:g15159743; GSPDB:GN00170
 Biotechnology
 0,
 #text_change 11-Jan-2002
 Blanchard, ; Scott, C.
 Length 123
 Length 125,
 Length 119
 Indels
 presence
 Indels
 Indels
 (type 1)
 M.; Qurollo, ; Lappas, C.;
 0f
 S.E.; Ferguson,
 0
 Agent
 0
 #status
 0;
 pseudoazurin
 Gaps
 Gaps
 Gaps
 Agrobacterium
 (strain
 predicted
 B.; Goldn
Markelz,
 0
 0
 0
 GSPDB:(
 Goldin
 S.J.
 in
 크
```

74

NLDA 77

```
R;Glaser, P.; Frangeul, L.; Buchrieser, C.; Ar.; Dominguez-Bernel, G.; Duchaud, E.; Durand, D.; Jones, L.M.; Karst, U.
Science 294, 849-852, 2001
 hypothetical secreted protein lmo2809 [imported] - C:Species: Listeria monocytogenes C:Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 C:Accession: AH1425
 A; Molecule type: DNA
A; Residues: 1-126 <WIL>
A; Cross-references: EMBJ
 밁
 δÃ
 submitted to the EMBL Data Library, A; Reference number: Z19002
 hypothetical protein B0035.4 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #to C;Accession: T18655
 RESULT
T18655
 A:Cross-references: GB:U48255; NID:g1199654; PIDN:AAA88909.1; PID:g1199655
A:Accession: S5339
A:Status: preliminary
A:Molecule type: protein
A:Residues: 23-24,'X',26-27,'X',29-34,'X',36-37,'X',39-40,'X',42-47,'X',49-58,'X',60,'XR
C:Superfamily: Ly-6 antigen; Ly-6 homology
E:23-101/Domain: Ly-6 homology <LY6>
 C:Species: Rattus norvegicus (Norway rat)
C:Species: Rattus norvegicus (Norway rat)
C:Date: 01-Aug-1995 #sequence_revision 01-Sep-1995 #text_chang
C:Accession: $53340; $553349
R;Rushmere, N.K.; Harrison, R.A.; van den Berg, C.W.; Morgan,
Biochem. J. 304, 595-601, 1994
A:Title: Molecular cloning of the rat analogue of human CD59:
A:Reference number: $53339; MUID:95091697; PMID:7528012
A:Accession: $53340
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-126 <RUS>
A:Cross-references: GB:U48255; NID:g1199654; PIDN:AAA88909.1;
 A; Authors:
 AH1425
 RESULT 42
 A; Introns: 29/3; 73/3
 A; Map position:
 A; Experimental source:
 A; Reference number: A; Accession: T18655
 A; Gene: CESP:B0035.4
 A;Status:
 R; White,
 RESULT
S53340
 В
 QY
 Query Match
Best Local S
Matches 4
 Superfamily:
 Genetics:
 Query Match
Best Local
 Matches
 protein
 121
 40
 1 NLDA 4
 44 NLDA 47
 Local Similarity
 1 NLDA 4
 NLDA
 preliminary; translated
 Rattus norvegicus (Norway rat)
-Aud-1995 #sequence_revision 01-Sep-1995 #text_change 28-May-1999
 Similarity
 4.
 124
 Arabidopsis
 rat
 Conservative
 Conservative
 EMBL: 273102; PIDN: CAA97410.1; GSPDB: GN00022; CESP: B0035.4 ce: clone B0035
 2001
Kuhn,
 100.0%;
 100.0%;
 thaliana hypothetical protein F22013
 X
.
 .08;
 Kunst,
 0;
 0;
 Score 20; DE
Pred. No. 3.5
0; Mismatches
 from
 Score 20; I
Pred. No. 3.
 May 1996
 Mismatches
 F . ,
 15-Oct-1999 #text_change
 GB/EMBL/DDBJ
 Kurapkat,
 Amend,
 ۲.;
 DВ
 DB 2;
3.5e+02;
 .5e+02;
 2
 Dussurget,
 Α.;
 #text_change
 Listeria
 0;
 G.;
 Length 126;
 Length 126;
 Baquero, F
surget, O.;
 Indels
 Indels
Madueno,
 monocytogenes
 structural comparison
 F.; Berch
 27-Nov-2001
 29
 21-Jul-2000
 0;
 EI
.
 0;
 Berche, P.;
tian, K.D.;
 Gaps
 Gaps
Maitournam,
 (strain
 0;
 0;
 ; Bloecker
Fsihi, H.
Α.,
 EGD-e
 with
```

```
A;Reference number: AB1807; MUID:21595285; PMID:11759840
A;Recession: AE1933
 hypothetical protein alr1016 [imported] Nostoc sp. (strain PCC 7120) (Species: Nostoc sp. strain PCC 7120) is alsynonym of Anabaena sp. strain C:Date: 14-Dec-2001 *sequence_revision 14-Dec-2001 *text_change 30-Jun C:Accession: AE1933
 A; Molecule type: DNA
A; Residues: 1-129 <KUR>
A; Cross-references: GB:
 R;Kaneko, T.; Nakamura, Y.; Wolk, C.P.;
Nakazaki, N.; Shimpo, S.; Sugimoto, M.;
DNA Res. 8, 205-213, 2001
A;Title: Complete Genomic Sequence of th
 A)Experimental source: strain EGD-e C;Genetics:
 A; Experimental
 Science 294, 849-852, 2001
A; Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno, E.; ok, C.; Schlueter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.; A; Title: Comparative genomics of Listeria species.
A; Reference number: AB1077; MUID:21537279; PMID:11679669
A; Accession: AG1425
 C; Geneti
A; Gene:
 A; Status: preliminary
 맑
 Qγ
 AE1933
 A; Gene:
 A; Molecule type:
A; Residues: 1-12
 C;Accession: AG1425
R;Glaser, P.; Frangeul, L.; Buchrieser, C.; Amend, A.;
R;Glaser, P.; Frangeul, G.; Duchaud, E.; Durand, L.; Dussu
D.; Jones, L.M.; Karst, U.
 C;Species: Listeria monocytogenes
C;Date: 27-Nov-2001 #sequence_revision
 밁
 A; Status: preliminary
 QY
 A;Cross-references: GB:NC_003210; PIDN;CAD01022.1; PID:g16412309; GSPDB:GN00177
 ok, C.; Schlueter, T.; Simoes, N.;
A;Title: Comparative genomics of Li
A;Reference number: AB1077; MUID:21
A;Accession: AH1425
 hypothetical secreted protein lmo2808 [imported] -
 A; Experimental source:
 A; Molecule type: DNA
A; Residues: 1-126 <GLA>
 A; Status: preliminary
Genetics:
 Matches
 Query Match
Best Local :
 Matches
 Query Match
 Genetics:
 Best
 53 NLDA
 53 NLDA
 Local
 1 NLDA 4
 1mo2808
 1 NLDA 4
 1mo2809
 1-127
 4;
 Similarity
 4.
 Similarity
 source:
 56
 DNA
 Conservative
 Conservative
 <GLA>
 GB:BA000019; PIDN:BAB72973.1; ce: strain PCC 7120 |
 strain
 100.0%;
 100.0%;
 es, N.; Tierrez, A.; Vazquez-
cs of Listeria species.
MUID:21537279; PMID:11679669
 EGD-e
 0,
 0;
 PIDN:CAD01021.1;
 Score
Pred!
 Score
Pred.
 Mismatches
 Mismatches
 Kuritz, T.; Sa:
Takazawa, M.;
 27-Nov-2001
 No.
 No. 3.
 3.6e+02;
 DB
 DВ
 5e+02;
 Vazquez-Boland, J.A.; Voss, H.;
 2
 2;
 PID:g17130362;
 Dussurget,
 0
 PID:g16412308;
 Listeria monocytogenes
 Sasamoto, S
M.; Yamada,
 #text_change
 Length 127;
 Length
 Baquero, F
surget, O.;
 Indels
 S.;
 strain PCC 7120
30-Jun-2002
 F.; Berche, P.; Entian, K.D.;
 GSPDB:GN00179
 27-Nov-2001
 0;
 Watanabe,
 GSPDB:GN00177
 0;
 Yasuda, M.;
 Gaps
 Gaps
 Maitournam,
Voss, H.; W
 (strain
 0
 0;
 Tabata
 ; Bloec
Fsihi,
 Wehla
 Wehla
 2
```

```
probable DNA-binding protein STY2429 [imported] - Salmonella enterica subsp. enterica se C:Species: Salmonella enterica subsp. enterica serovar Typhi A:Note: this species has also been called Salmonella typhi C:Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 09-Nov-2001 C:Accession: AC0782 R:Parkhill, J: Dougan, G: James, K.D.; Thomson, N.R.; Pickard, D.; Wain, J.; Churcher, R:Parkhill, J: Dougan, G: James, K.D.; Thomson, N.R.; Pickard, D.; Wain, J.; Churcher, th, T.; Connerton, P.; Cronin, A.; Davis, P.; Davies, R.M.; Dowd, L.; White, N.; Farrar, S: Woule, S.; O'Gaora, P.
Nature 413, 848-852, 2001 A:Authors: Parry, C.; Quall, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A:Authors: Parry, C.; Quall, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; A:Title: Complete genome sequence of a multiple drug resistant Salmonella enterica serov A:Reference number: AB0502; pMID:11677608 A:Status: preliminary A:Molecule troe. Na
 RESULT 45
AC0782
 ₽
 C; Superfamily: Mycobacterium tuberculosis hypothetical protein Rv2705c
Search completed: February 6, 2003, 11:23:12 Job time: 12.5 secs
 Q
 C;Genetics:
A;Gene: STY2429
 A;Molecule type: DNA A;Residues: 1-129 <PAR>
A;Cross-references: GB:AL513382; PIDN:CAD02577.1; PID:g16503435; GSPDB:GN00176
 밁
 á
 Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 4; Conservative 0
 Query Match
Best Local Similarity
Matches 4; Conserv
 101 NLDA 104
 1 NLDA 4
 70 NLDA 73
 1 NLDA 4
 nilarity 100.0%; Score 20; DB 2; Length 129; milarity 100.0%; Pred. No. 3.6e+02; Conservative 0; Mismatches 0; Indels
 0;
 Score 20; DB 2;
Pred. No. 3.6e+02;
 Mismatches
 Length 129;
 Indels
 0;
 0;
 Gaps
 Gaps
 0;
 0,
```

| •          |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------|----------|--------|
|            |                                               | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               | <b>经经验基本企业</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 | ************************************** |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Ta - '                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |                                        |          |        |
|            |                                               | 7.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | •               |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        | g. 195 a |        |
| 1          |                                               | ***************************************                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Control Control |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ,<br>Tû                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |                                        |          |        |
|            | •.                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
| h          |                                               | e de la companya de l | *.j                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |                                        |          |        |
| 1-16<br>   | •                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        | •        |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
| SAST-CON-  |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | , 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |                                        |          |        |
|            |                                               | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            | •                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               | 13.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
| Å.         |                                               | F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            | *a                                            | - * - * - * - * - * - * - * - * - * - *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | · * · ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        | ··•γ     | 1/s. w |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
| lui i      | 2                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 | •                                      |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
| <b>6</b> . |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
| 2          |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
| Š.         | # ·                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
| 414        | . ·                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            | *                                             | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | * ( · ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |                                        |          |        |
|            | A                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
| V.,.       | ·, · · · · · · · · · · · · · · · · · ·        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            | ,                                             | , i = 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | - 1 Mar.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |                                        |          |        |
| ¥-:        |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
| - T        |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
| ×          | W *                                           | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Mark to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 | * *                                    |          |        |
|            | <u>, , , , , , , , , , , , , , , , , , , </u> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A Common |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
| r.         |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A Marie                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |                                        |          | 19.5   |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          | 4.     |
|            |                                               | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 | . **                                   |          | 4      |
| 7          |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          | *      |
| M          |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 19 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 | , ,                                    |          | 15     |
| 1          |                                               | , , , , , , , , , , , , , , , , , , ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | · · · · · · · · · · · · · · · · · · ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 | · · · · · · · · · · · · · · · · · · ·  |          |        |
| 7          |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |                                        |          |        |
|            |                                               | A STATE OF THE STA | 1,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |                                        | N        |        |
| ٠.         | *                                             | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |                                        |          | An.    |
| . 12       |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        |          |        |
|            |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |                                        | . 0      |        |
| 4          |                                               | i de la compania del compania de la compania del compania de la compania del compania de la compania de la compania del compania de la compania de la compania de la compania de la compania del compania  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ý.              |                                        |          |        |

```
Result
No.
 Minimum DB :
Maximum DB :
 8
 Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 45 s
 Database :
 Total number of hits satisfying chosen parameters:
 Searched:
 Scoring table:
 Sequence:
 Title:
Perfect score:
 Run on:
 protein -
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 Score
 seq
 protein search, using
 length: 0
length: 2000000000
 Query
Match
 BLOSUM62
Gapop 10.0 ,
 PAT943-6
20
 February 6, 2003, 11:16:00; Search time 5.33333 Seconds (without alignments) 31.107 Million cell updates/sec
 112892 seqs, 41476328 residues
 1 nlda 4
 SwissProt_40:*
 GenCore version 5.1.3 Compugen Ltd.

 Length
 В
 Gapext 0.5
summaries
 SW
 SUMMARIES
 mode1
 547
 09kf91
0001791
p80649
p80649
p29cmy0
p2723423
033422
033422
051423
052433
p80401
p52933
p80407
p18934
p1893
 P80310
Q9k923
Q96fq6
 P40440
P76258
 P40422
P05835
P46041
 Description
 2 pseudomonas
3 borrelia bu
1 paracoccus
0 bacillus ce
9 listeria in
4 listeria mo
8 rhodobacter
5 clostridium
5 synechocyst
0 rhizobium m
 8 mycobacteri
2 saccharomyc
5 escherichia
1 frankia aln
7 escherichia
0 bacillus am
0 sus scrofa
1 bacillus ha
6 homo sapien
0 saccharomyc
0 escherichia
1 bacillus ha
1 bacillus ha
1 bamo sapien
0 paracoccus
0 pasteurella
1 rattus nory
 caenorhabdi
anabaena sp
thermococcu
pyrococcus
bacillus pu
 caenorhabdi
```

| RESULT 2 RPCX_YEAS ID RPCX AC P4.04 DT 01-F DT 01-F DT 15-J DE CNC GN RPC1 OS SACC OC EURA OC SACC OX NCBI RN [1]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Query M<br>Best Lo<br>Matches<br>Qy 1 | RP SEQUIF RA MEDLI RA Ford RT Ford RT evolt RI J. Mc CC This CC betwee CC the F CC use CC cor se CC cor. CC co | SUI<br>87_                                                                                                                                                                                                                                                                                                                                                               | 34<br>44<br>44<br>44<br>44<br>44<br>44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SULT 2  RPCX_YEAST  RPCX_YEAST  P40422;  P40422;  O1-FEB-1995 (Rel. 31, Created) O1-FEB-1995 (Rel. 31, Last sequence update) 15-JUU-1999 (Rel. 38, Last annotation update) DNA-directed RNA polymerases I, II, and III 7.7 kDa polypeptide (EC 2.7.7.6) (ABC10-alpha).  RPC10 OR RPB12 OR YHR143BW. Saccharomyces cerevisiae (Baker's yeast). Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetales; Saccharomyc | 0 -                                   | SEQUENCE FROM N.A.  MEDILINE-98100335; PubMed-9636706; FORD M.E., Sarkis G.J., Belanger A.E., Hendrix R.W., Hatfull G.F.; Ford M.E., Sarkis G.J., Belanger A.E., Hendrix R.W., Hatfull G.F.; "Genome structure of mycobacteriophage D29: implications for phage evolution."; J. Mol. Biol. 279:143-164(1998).  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to licenseeisb-sib.ch).  EMBL; AF022214; AAC18517.1;  EMBL; AF022214; AAC18517.1;  EMBL; AF022214; AAC18517.1;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | LT 1  _BPMD2  _BPMD2  VG87_BPMD2  STANDARD; PRT; 54 AA.  064268;  15-DEC-1998 (Rel. 37, Created)  15-DEC-1998 (Rel. 37, Last sequence update)  15-DEC-1998 (Rel. 37, Last annotation update)  Gene 87 protein (GP87).  87.  Mycobacteriophage D29.  Vituses; dsDNA viruses, no RNA stage; Caudovirales; Siphoviridae; unclassified Siphoviridae.  NCBI_TaxID=28369;  [1] | 20 100.0 191 1 TXLA_SYNP7 P35080 synechococc 20 100.0 195 1 IND1_HUMAN P37290 homo sapien 20 100.0 197 1 YDB6_YEAST 012055 saccharomyc 20 100.0 202 1 GDIR_YEAST 012434 saccharomyc 20 100.0 207 1 COAE_XYLFA 09pai2 xylella fas 20 100.0 210 1 SPOA_BACCI P34718 bovine rota 20 100.0 210 1 SPOA_BACCI P36358 porcine rota 20 100.0 211 1 SODE_ACIAM P3650 cercocebus 20 100.0 212 1 IL6_CERTO P05231 homo sapien 20 100.0 212 1 IL6_MACFA P05231 homo sapien 20 100.0 212 1 IL6_MACFA P79341 macaca fasc ALIGNMENTS |

```
TRY3
ID
AC
DT
DT
DT
DT
DT
 SERVINE REPORT OF THE PROPERTY RESULT
 밁
 δÃ
 Matches
 Query Match
Best Local :
 P05835;
01-NOV-1988 (Rel. (
01-NOV-1988 (Rel. (
15-DEC-1998 (Rel.)
 TRY3_
 ECOLI
 between the Swiss Institute of Bioinformatics and the EMBL outstation -
the European Bioinformatics Institute. There are no restrictions on its
use by non-profit institutions as long as its content is in no way
modified and this statement is not removed. Usage by and for commercial
entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
 VIII.";

Science 265:2077-2082(1994).

-I - FUNCTION: DNA-DEPENDENT RNA POLYMERASE CATALYZES THE TRANSCI-
-I - FUNCTION: DNA-DEPENDENT RIP FOUR RIBONUCLEOSIDE TRIPHOSPHATES
 SEQUENCE
 InterPro; IPR003221; DNA_RNApol_7kD.
Pfam; PF03604; DNA_RNApol_7kD; 1.
ProDom; PD012151; DNA_RNApol_7kD; 1.
Transferase; DNA-directed_RNA_polymerase;
 EMBL; U23378; AAA64417.1; -. EMBL; U10397; AAB68994.1; -. SGD; S0001185; RPC10.
 This
 Nuclear protein; Zinc-finger.
ZN_FING 31 51
 Johnston M., Andrews S., Brinkman R., Cooper J., Ding H., Dover J., Du Z., Favello A., Fulton L., Gattung S., Geisel C., Kirsten J., Kucaba T., Hillier L., Jier M., Johnston L., Langston Y., Latreille P., Louis E.J., Macri C., Mardis E., Menezes S., Mouser L. Whan M., Rifkin L., Riles L., St Peter H., Trevaskis E., Vaughan K. Vignati D., Wilcox L., Wohldman P., Waterston R., Wilson R.,
 Vaudin M.;
 MEDLINE=94378003; PubMed=8091229;
 Treich I., Carles C., Riva
"RPC10 encodes a new mini
 "Complete nucleotide
 Johnston M., Andrews
 SEQUENCE FROM N.A
 Gene Expr.
 polymerases.";
 MEDLINE=92314714;
 SEQUENCE FROM N.A.,
STRAIN=S288c;
 11
 H
 L NLDA 4
||||
L NLDA 14
 SUBCELLULAR LOCATION: Nuclear.
PTM: THE N-TERMINUS IS BLOCKED.
MISCELLANEOUS: THREE DISTINCT ZINC-CONTAINING RNA
FOUND IN EUKARYOTIC NUCLEI: POLYMERASE I FOR THE R
 protein
 {RNA}(N).
SUBUNIT: EACH CLASS OF I
DIFFERENT POLYPEPTIDES.
 SUBSTRATES.

CATALYTIC ACTIVITY: N nucleoside triphosphate =
 PRECURSOR, POLYMERASE II F
 ECOLI
 SWISS-PROT entry is copyright. It is produce en the Swiss Institute of Bioinformatics
 POLYMERASES
 4.
 Similarity
 14
 70 AA;
 Conservative
 STANDARD;
 POLYMERASE II FOR THE MRNA PRECURSOR,
 AB972;
 . 09, Created)
. 09, Last sequ
. 37, Last anno
 PubMed=1617300;
 7716 MW;
 100.0%;
 AND
 sequence of Saccharomyces cerevisiae chromosome
 Riva
 SEQUENCE
 sequence update)
annotation update)
 subunit shared
 RNA
 X
 0,
 SIHT
 Score
Pred.
 066A3D982EC7361E
 C4-TYPE
 PRT;
 POLYMERASE IS ASSEMBLED FROM
 Mismatches
 Sentenac
 SUBUNIT IS SHARED BY
 OF
 20;
No.
 (POTENTIAL).
82EC7361E CRC64;
 4-23
 75
 DB
67;
 is produced through
 Α:
 A
 AND
 bу
 Transcription;
 1;
 yeast nuclear
 0;
 64-70
 Length 70;
 NA POLYMERASES ARE RIBOSOMAL RNA
AND POLYMERASE
 z
 THE TRANSCRIPTION
 D FROM 9 TO 15
ALL 3 YEAST RNA
 diphosphate
 RNA
 b
 0;
 collaboration -
 Gaps
 .×
 ARE
 L.
 0
```

```
RESULT 4
YNI1_FRAAL
 밁
 Q
 Query Match
Best Local S
Matches 4
 MEDLINE-95369734; PubMed=7642138; Harriott O.T., Hosted T.J., Benson D. "Sequences of nifx, nifW, nifz, nifB nitrogen fixation gene cluster."; Gene 16::63-67(1995).
 YNI1_FRAAL
P46041;
 STRAIN=CpI1
 SEQUENCE
 01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence up
16-CCT-2001 (Rel. 40, Last annotation
Hypothetical 9.1 kDa protein in nifx-r
 EMBL;
PIR; C
 Bacteria;
 "Identification and characterization of the products from the translation of tray genes of plasmid R100.";
J. Bacteriol. 170:2749-2757(1988).
-1- FUNCTION: INVOLVED IN THE CONJUGATION PROCESS OF BACTERIAL CEIFOR THE EXCHANGE OF PLASMID DNA. IT IS ALSO RESPONSIBLE FOR CONJUGAL DNA METABOLISM. TRAY IS REQUIRED FOR STRAND-SPECIFIC NICKING AT ORIT, THE TRANSFER ORIGIN.
-1- SIMILARITY: TO TRAY PROTEIN OF OTHER PLASMIDS.
 Actinomycetales;
 Frankia alni.
 Plasmid; Conjugation; DNA-binding SEQUENCE 75 AA; 8542 MW; 88D4)
 This SWISS-PROT entry is copyright. It is produced between the Swiss Institute of Bioinformatics the European Bioinformatics Institute. There a use by non-profit institutions as long as immodified and this statement is not removed. Us
 entities requires a license agreement (S or send an email to license@isb-sib.ch).
 PLASMID=IncFII R100;
MEDLINE=88227859; PubMed=2836369;
Inamoto S., Yoshioka Y., Ohtsubo
 PLASMID-IncFII R100-1;
MEDLINE-87008371; PubMed=3531163; |
Finlay B.B., Frost L.S., Paranchych W.;
"Origin of transfer of IncF plasmids and
type II oriT, traM, and traY alleles from R100-1.";
 SEQUENCE FROM
 J. Bacteriol.
 SEQUENCE FROM N.A.
 Escherichia
 Bacteria;
 Plasmid IncFII R100-1,
 Escherichia coli
 IR; C25033; BVECRY.
IR; C32014; C32014.
 57
 NLDA
 NLDA
 M15136; AAA26076.1; M20941; AAA26073.1;
 Similarity 4; Conserv
 Actinobacteria; Actinobacteria (class);
etales; Frankineae; Frankiaceae; Frankia
 4
 60
 Proteobacteria; gamma entage
 Conservative
 N.A.
 168:132-139(1986).
 STANDARD;
 TO
 SIMILAR
 100.0%;
PROTEINS
 0;
 agreement (See
 Frankiaceae;
 88D4B04C4B5DE07A CRC64;
 Pred!
 Score
 tation update)
nifx-nifW intergenic region
 Mismatches
 nid IncFII R100.
sµbdivision; Enterobacteriaceae;
 .
円-
 20;
 NI
 and
 and
 from
 82
 OTHER
 There are no restrictions ong as its content is in
 is produced
 two
 A
 DΒ
 nucleotide
m ColB4-K98
 . Usage by and for commercial http://www.isb-sib.ch/announce/
 1;
 ORF
NITROGEN-FIXING BACTERIA.
 0;
 Length
 and the
 in
 Actinobacteridae;
 Indels
 through
 the
 sequences of and the type
 Ø
 (ORF1).
 0;
 collaboration
 traJ
 Gaps
 the
IV
 no
 on
 0;
```

```
RESULT 5
GLR1_ECOLI
 밁
 Ŷ
 Matches
 Query Match
Best Local
 LI-JUL-1986 (Rel. 01, Last s. 16-OCT-2001 (Rel. 40, Last a. Glutaredoxin 1 (Grx1). GRXA OR GRX OR B0849. Escherichia coli.
 GLR1_ECOLI
P00277;
21-JUL-1986
21-JUL-1986
16-OCT-2001
 Yano M., Horiucni I.,
Yano M., Horiucni I.,
"A 718 kb DNA sequence of the E
corresponding to the 12.7-28.0
nNA Res. 3:137-155(1996).
 SEQUENCE FROM N.A.
STRAIN-K12 / MG1655;
MEDLINE-97426617; PubMed-9278503;
Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F. Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J.,
 MEDLINE-87005940; PubMed-3530878;
MEDLINE-87005940; PubMed-3530878;
Hoeoeg J.-O., von Bahr-Lindstrom H., Joernvall H.,
 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
 Oshima T., Aiba H., Baba T., Fujita K., Hayashi K., Honjo A., Ikemoto K., Inada T., Itoh T., Kajihara M., Kanai K., Kashimoto K., Kitugawa M., Makino K., Masuda S., Miki T., Mizobuchi K., Mori H., Motomura K., Nakamura Y., Nashimoto H., Nishio Y., Saito N. Sampel G., Seki Y., Tagami H., Takemoto K., Wada C., Yamamoto Y.,
 Mau E
 Chatterjee
 Bacteria; Proteobacteria;
 Hypothetical
SEQUENCE 82
 MEDLINE=97061202; PubMed=8905232;
 SEQUENCE FROM N.A.
 SEQUENCE FROM N.A.
 NCBI_TaxID=562;
 Escherichia
 17
 Local Similarity
 -
 THIS PROTEIN IS GENERALLY FOUND IN THE NIFX-NIFW INTERGENIC OR IN THE FIXX 3^\prime REGION.
 complete genome sequence of Escherichia coli K-12."; nce 277:1453-1474(1997).
 NLDA 4
 43:13-21(1986)
 NLDA 20
 L29299; AAC82972.1; -
 4
 e P.K., Stei
(DEC-1994)
 82
 Conservative
 protein; Nitrogen
2 AA; 9081 MW; AI
 STANDARD;
 Sternberg N.L.;
 ç
 100
 Created)
 .00.0%;
 the EMBL/GenBank/DDBJ databases
 gamma
 sequence update) annotation updat
 0;
 en fixation.
AFBBD86827B4322C CRC64;
 Score
Pred.
 Escherichia
) min region
 PRT;
 subdivision;
 Mismatches
 No.
 20;
 85
 79;
 ₽
 DВ
 coli K-12
on the lir
 1;
 Enterobacteriaceae;
 0;
 Length
 12 genome
linkage map."
 gene
 Indels
 Holmgren
gene of Es
 en A.;
Escherichia
 0;
 collaboration
 ۷.,
 Gaps
 REGION
 z
,
 0;
```

PDB; 1GRX; 24-JUN-98.
ECC2DBASE; B011.0; GTA
ECCGENE; EG10417; GTXA.
InterPro; IPR002109; Glutaredoxin.
Pfam; PF00462; glutaredoxin; 1.
PRINTS; PR00160; GLUTAREDOXIN;
PROSITE; PS00195; GLUTAREDOXIN; 1.

Redox-active center; Deoxyribonucleotide :

; Electron transport; synthesis; Complete |

3D-structure;

PIR; A00283; GDEC.
PDB; 1EGO; 31-OCT-93.
PDB; 1EGR; 31-OCT-93.
PDB; 1GRX; 24-JUN-98.

```
Kelley J.J. III, Caputo M., Eaton S.F., Laue T.M., Bushweller J.H.;

"Comparison of backbone dynamics of reduced and oxidized Escherichia
coli glutaredoxin-1 using 15N NMR relaxation measurements.";

Biochemistry 36:5029-5044(1997).

-i- FUNCTION: THE DISULTIDE BOND FUNCTIONS AS AN ELECTRON CARRIER IN
THE GLUTATHIONE-DEPENDENT SYNTHESIS OF DEOXYRIBONUCLEOTIDES BY THE
ENZYME RIBONUCLEOTIDE REDUCTASE. IN ADDITION, IT IS ALSO INVOLVED
IN REDUCING SOME DISULFIDES IN A COUPLED SYSTEM WITH GLUTATHIONE
 Holmgren A., Wuethrich K.;
"NMR structure of oxidized Escherichia with reduced E. coli glutaredoxin and f proteins.";
 J. Mol.
[8]
 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bloinformatics and the Entre European Bioinformatics Institute. There are no restiuse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
 MEDLINE=92046066; PubMed=1942053; Sodano P., Xia T.-H., Bushweller J.H., Bjoernberg O., Holmgren A., Billeter M., Wuethrich K.; Billeter M., Wuethrich K.; "Sequence-specific IH NNR assignments and determination of the three-dimensional structure of reduced Escherichia coli glutaredoxin."; J. Mol. Biol. 221:1311-1324(1991).
 glutaredoxin. Sequence-specific assignments
determination of the oxidized form.";
Eur. J. Biochem. 200:369-377(1991).
 Hoeoeg J.-O., Joernvall H., Holmgren A., Carlquist M., Persson "The primary structure of Escherichia coli glutaredoxin. Dista homology with thioredoxins in a superfamily of small proteins redox-active cystine disulfide/cysteine dithiol.";

Eur. J. Biochem. 136:223-232(1983).
 EMBL;
EMBL;
EMBL;
EMBL;
 STRUCTURE BY NMR.
MEDLINE-93278264; PubMed-1304339;
Xia T.-H., Bushweller J.H., Sodano
 entities requires a license agreement (S or send an email to license@isb-sib.ch).
 STRUCTURE BY NMR. MEDLINE-97270442;
 STRUCTURE
 Fuchs J.A., Wuethrich K.;
 MEDLINE=91364685; PubMed=1889405; Sodano P., Chary K.V.R., Bjoernberg
 STRUCTURE BY NMR.
 Eur. J. Biochem. [6]
 Protein
 MEDLINE=84004402; PubMed=6352262;
 STRAIN-K12;
 "Nuclear magnetic resonance studies
 L; M13449; AAA23936.1; -.

J; U18655; AAC43449.1; -.

L; AE000187; AAC73936.1; -.

L; D90722; BAA35552.1; -.

L; D90723; BAA35560.1; -.

K; A00283; GDEC.

A00283; GDEC.
 SUBUNIT: MONOMER.
SIMILARITY: BELONGS
 REDUCTASE
 Sci.
 BY NMR.
 1:310-321(1992).
 PubMed=9125525;
 TO THE GLUTAREDOXIN FAMILY.
 ₽.,
 of.
 0.,
 (See http://www.isb-sib.ch/announce/
 coli glutaredoxin:
functionally relate
 recombinant
 Billeter
 Holmgren
 and
 X
 secondary
 Α.,
 Escherichia
 Bjoernberg
 Kren
 restrictions
 Persson
 and
 EMBL outstation
 Distant
 structure
 comparison
 a collaboration
 tor
 with
 coli
 commercia.
 g
```

```
밁
 Š
 SQ
 Matches
 Query Match
 "Recognition between a bacterial ribonuclease, barnase, and the structure 1:165-177(1993).

Y-RAY CRYSTATION (2.6 ANGSTROMS) OF COMPLEX WITH BARNASE.

"RAY CRYSTATION (2.6 ANGSTROMS) OF COMPLEX WITH BARNASE.

A A STRUCTURE 1:165-177(1993).
 P11540;
01-OCT-1989
01-JAN-1990
15-JUL-1999
 [2]
REVIEW
 This
 BARS_
 entities
 modified
 the
 "Three-dimensional solution structure and 13C assignments ousing nuclear magnetic resonance spectroscopy."; Biochemistry 33:8866-8877(1994).

-i- FUNCTION: INHIBITOR OF THE RIBONUCLEASE BARNASE. FORMS
 STRUCTURE BY NMR.
MEDLINE=94318630; PubMed=8043574;
 structure characterization of barstar."; FEBS Lett. 332:81-87(1993).
 Severik J., Urbanikova L., Dauter Z., Wilson Recognition of RNase Sa by the inhibitor complex at 1.7 A resolution.", Acta Crystallogr. D 54:954-963(1998).
 X-RAY CRYSTALLOGRAPHY (1.7 ANGSTROMS)
MEDLINE=98437624; PubMed=9757110;
 "Barnase and barstar.
expression of a cloned
 SEQUENCE FROM N.A.
MEDLINE=89012012; PubMed=3050134;
 Bacillus amyloliquefaciens
Bacteria; Firmicutes; Baci
 Barstar (Ribonuclease inhibitor).
 BACAM
 SEQUENCE
 DISULFID
 between
 MEDLINE=94009694; PubMed=8405454;
 Hartley R.W.
 Hartley R.W.;
 NCBI_TaxID=1390;
 Lubienski M.J., Bycroft M., Freund S.M.V., Fersht "Three-dimensional solution structure and 13C ass
 Lubienski M.J., Bycroft M., Jones D.N.M., F
 MEDLINE=90162921; PubMed=2696173;
 "Barnase and barstar:
 82
 Local
 1 NLDA
 European Bioinformatics Institute.
 SUBCELLULAR LOCATION: Cytoplasmic
 SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
 NLDA
 BACAM
 ion of a cloned ribonucle
Biol. 202:913-915(1988).
 NON-COVALENT COMPLEX.
 Similarity
 and
 non-profit institutions as long
 85
 4
 85
 (Rel. 12, Created)
(Rel. 13, Last sequence up
(Rel. 38, Last annotation
 this statement
 Conservative
 11
 AA;
 rstar. Expression of cloned ribonuclease.
 STANDARD;
 9685
 14
 100.0%;
 : two small proteins 14:450-454(1989).
 Bacillales; Bacillaceae;
 MW.
 is not removed.
 0
 REDOX-ACTIVE.
33C185A47021EF42 CRC64;
 Score
Pred.
 PRT;
 Bioinformatics titute. There \varepsilon
 Mismatches
 on update)
 No.
 its.
 Wilson K.S.;
(See
 89
 cloned
 ΑA
 as its content is in
 Fersht A.R.;
 barstar:
http://www.
 resonances
 fold
 1.
 Usage
 0;
 inhibitor
 Bacillus.
 Length 85
 and
 A.R.;
 Indels
 structure of
 bу
 fit
isb-sib.ch/announce,
 and
 and
 and its
 together.";
 permits
 secondary
 of
 A ONE-TO
 for
 0;
 barstar
 Gaps
 the
 commercial
 no
no
 its
 0;
```

```
RESULT
STATE

ACCORD

REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT

DR. REPT
 Дb
 Qy
 Query Match
Best Local S
Matches 4
 2_PIG
S112_PIG
P80310;
01-FEB-1994
01-FEB-1994
16-OCT-2001
 PROSITE;
 MEDLINE-95050708; PubMed=7961855; |
Dell'Angelica E.C., Schleicher C.H., Santc
"Primary structure and binding properties
$100-like calcium-binding protein from pig
J. Biol. Chem. 269.28929-28936(1994).
 SEQUENCE
 -i- TISSUE SPECIFICITY: FOUND ESSENTIALLY AMOUNTS FOUND IN LYMPHOCYTES.
-i- MISCELLANEOUS: IN THE ABSENCE OF ZINC
 PDB;
PDB;
 Calcium-binding;
 Pfam; PF01023; S_100; 1.
ProDom; PD000012; EF-hand; 1
ProDom; PD003407; CaBP_S100;
 Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9823;
 InterPro;
Pfam; PF01
 PDB;
 Sus scrofa
 S100A12
 Calgranulin
 ofam; PF00036; efhand;
 InterPro; IPR001751;
InterPro; IPR002048;
 TISSUE=Granulocyte;
 SEQUENCE
 SEQUENCE
 3D-structure.
INIT_MET
 ProDom; PD029050;
 or send an
 \frac{\omega}{\omega}
 SIMILARITY: SIMILARITY:
 MOLECULE.
 MOLECULE, IN THE PRESENCE OF
 NLDA
 1825;
 1AB7;
1A19;
 NLDA 36
 1BTB;
 1BTA;
 P80511;
 4;
 Similarity
 PS00018; EF_HAND; FALSE_NEG.
PS00303; S100_CABP; 1.
 4
 IPR000468; Barstar
 09-DEC-98.
09-DEC-98.
02-MAR-99.
 4 (Rel. 28, Created)
4 (Rel. 28, Last sequ
1 (Rel. 40, Last anno
n C (CAGC).
 31-JUL-94.
04-SEP-97.
08-APR-98.
 91
 (Pig).
 89
 email
 09-DEC-98
 09-DEC-98
 31-JUL-94.
 Conservative
 S01373
 AA;
 1E8A.
 AA;
 CAA33551.1;
 BELONGS 1
 Barstar;
 STANDARD;
 Zinc; Metal-binding.
31 EF-HAND 1 (
72 EF-HAND 2 (
SIMILARITY)
 to license@isb-sib
 Barstar; 1.
 0
10212 MW;
 10614
 Cetartiodactyla;
 Chordata;
 100.0%;
 EF-hand
 CaBP_S100.
 TO 2
 MW;
 THE S-10
 sequence update) annotation update)
 0,
 Craniata; Vertebrata; actyla; Suina; Suidae;
 B4204461432D7FCE CRC64
 Score
Pred!
 PRT;
 3AC7E76A9C43A505
 S-100 FAMILY.
HAND CALCIUM-BINDING
 ZINC
 Mismatches
 No.
 .ch).
 Santome J.A.; rties of calgranulin
 ZINC BINDS
BINDS TWO
 91
 pig
 (LOW AFFINITY) (BY SIMILARITY).
 (HIGH AFFINITY)
 86;
 ΑĀ
 DB
 IN GRANULOCYTES WITH SMALL
 granulocytes
 1;
 0,:
 CRC64;
 Length 89;
 ONE CALCIUM IONS
 Indels
 DOMAINS
 Euteleostomi;
Sus.
 (BY
 ,, (C
 SNOI
 Ø
 0;
 novel
 Gaps
 0;
```

```
RESULT 9
S112_HUMAN
ID S112_HUMAN
AC Q96FQ6;
DT 15-JUN-2002
DT 15-JUN-2002
 ő
 밁
 ş
 CMGC_BACHD
 밁
 RESULT
 Query Match
 Query Match
 Matches
 Matches
 TRANSMEM MOD_RES
 PROSITE: PS00409; PROKAR_NTER_METHYL: 1.

Transport; Methylation; Transmembrane; Complete proteome.
PROPEP 1 10 BY SIMILARITY.

CHAIN 11 102 COMG OPERON PROTEIN 3 HOMOLOG.
TRANSMEM 11 31 POTENTIAL.
 STRAIN-C-125 / JCM 9153;
MEDLINE-20512582; PubMed-11058132;
Takami H., Nakasone K., Takaki Y., Maeno G., Siruli F., Hirama C., Nakamura Y., Ogasawara N.,
 SEQUENCE
 modified and this statement
 the European Bioinformatics Institute. Thuse by non-profit institutions as long
 halodurans and genomic sequence comparison wit
Nucleic Acids Res. 28:4317-4331(2000).
-!- FUNCTION: REQUIRED FOR TRANSFORMATION AND
 Bacillus halodurans.
Bacteria; Firmicutes; Bacillales; Bacillaceae; Bacillus.
 ComG operon
 DISULFID
 PRINTS; PR00885; BCTERIALGSPH
 InterPro;
 InterPro; IPR000983; Bac_GSPG.
InterPro; IPR002416; Bac_GSPH.
 EMBL; AP001516; BAB06546.1;
 or send an email to license@isb-sib.ch).
 entities requires a
 "Complete genome sequence of the alkaliphilic bacterium E
halodurans and genomic sequence comparison with Bacillus
 Horikoshi K.;
 SEQUENCE FROM N.A.
 NCBI_TaxID=86665;
 16-OCT-2001
16-OCT-2001
 Local
 8
 59
 70
 1 NLDA 4
 Local
 1 NLDA 4
 SUBUNIT: HOMODIMER (BY SIMILARITY).
 SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
 SIMILARITY)
 NLDA 62
 NLDA 73
 BACHD
 4
 Similarity
 pr001120; Prok_N_methyltn.
pr00813; BCTERIALGSPG.
 4
 Similarity
 1 (Rel. 40, Created)
1 (Rel. 40, Last segu
1 (Rel. 40, Last anno
n protein 3 homolog p
 (Rel.
 102 AA;
 Conservative
 Conservative
 STANDARD;
 STANDARD;
 41,
41,
 10
102
31
11
 11368
 license agreement (See
 100.0%;
 100
 Last sequence upoa
Last annotation up
homolog precursor.
Created)
Last sequence
 .0%;
 MW;
 sequence update) annotation updat
 0;
 is not removed
 0
 ВY
 Score 20; Pred. No.
 METHYLATION (BY
 Pred. No. le;
// Mismatches
 Score
 PRT;
 3C4BD89B08564A43 CRC64;
 SIMILARITY
 Mismatches
 20;
 102
 103
 1e+02;
 88;
 A
 DB
 ₿
 DВ
 as its content
 http://www.isb-sib
 , Sasaki R., M
 1;
 SIMILARITY).
 Usage
 0;
 0,
 DNA-BINDING
 Length 91
 Length 102;
 Indels
 Ьy
 Bacillus subtilis.
 and
 Masui
 (BY
 0,
 for
 0;
 .ch/announce/
 Gaps
 Gaps
 no
 0;
 0
```

```
밁
 Š
 YIR1_YEAST
 RESULT 10
 InterPro, IPR0020+0, InterPro; IPR0020+0, InterPro; IPR0036; efhand; 1.

Pfam; PF00036; efhand; 1.

PROSITE; PS00018; EF_HAND; 1.

PROSITE; PS00303; S100_CABP; 1.

"TTTE: PS00303; S100_CABP; 1.

"TTTE: PS00303; S100_CABP; 1.
 Matches
 Query Match
Best Local
 01-FEB-1995 (Rel. 31, C
01-FEB-1995 (Rel. 31, I
15-JUN-2002 (Rel. 41, I
Hypothetical 11.6 kDa p
YIL171W OR YI9402.06A.
 STRAIN-S288C / AB972;
Barrell B.G., Badcock K., Bankier A.T., Bowman S., Brown D.,
Churcher C.M., Connor R., Copsey T., Dear S., Devlin K., Fraser
Gentles S., Hamlyn N., Horsnell T.S., Hunt S., Jagels K., Jones
Louis E., Lye G., Moule S., Moule T., Odell C., Pearson D.,
Rajandream M.A., Riles L., Rowley N., Skelton J., Smith V.,
Walsh S.V., Whitehead S.;
Submitted (DEC-1994) to the EMBL/GenBank/DDBJ databases.
 CA_BIND
 YIR1_YE
P40440;
 This SWISS-PROT entry is copyright. It is produced through a copyright the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and formodified and this statement is not removed.
 Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
 -i- SUBCELLULAR LOCATION: Integral membrane protein (PI-i- SIMILARITY: BELONGS TO THE SUGAR TRANSPORTER FAMILY-i- CAUTION: YIL171W AND YIL170W REPRESENT THE N- AND C
 Eukaryota; Fungi; I
Saccharomycetales;
 EMBL; BC010541; AAH10541.1; -. EMBL; BC019099; AAH19099.1; -.
 entities requires a license agreement (S or send an email to license@isb-sib.ch).
 NCBI_TaxID=4932;
 Saccharomyces cerevisiae (Baker's yeast).
 -!- SIMILARITY: BELONGS TO THE S-100 FAMILY.
 Submitted (JUL-2001)
 Strausberg R.;
 TISSUE=Brain,
 SEQUENCE FROM
 NCBI_TaxID=9606
 Homo sapiens (Human)
 15-JUN-2002 (Rel. 41, Last annotation Putative S100 calcium-binding protein
 SEQUENCE FROM
 SEQUENCE
 65
 NLDA 68
 NLDA 4
 YEAST
 4;
 Similarity
 103 AA;
 100.0%; ilarity 100.0%; Conservative
 | protein;
| 23 | 36
| 67 | 78
 and
 N.A
 N.A.
 STANDARD;
 . 31, Created)
. 31, Last sequ
. 41, Last anno
 Cervix;
 Ascomycota;
 Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetaceae; Saccharomyces.
 78
11801 MW;
 to the EMBL/GenBank/DDBJ databases NGS TO THE S-100 FAMILY.
 Last sequence update)
Last annotation updat
protein in SDL1 5'reg
 0;
 Score 20; DB
Pred. No. 1e+
0; Mismatches
 EF-HAND 1 (LOW AFF)
EF-HAND 2 (HIGH AFF)
7D00C08F85697A6C
 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
 update)
MGC17528
 109
 update)
5'region.
 noved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
 (LOW AFFINITY)
(HIGH AFFINITY)
 DB 1;
1e+02;
 Length 103
 AND C-TERMINAL
 Indels
 (Probable).
 (POTENTIAL).
) (POTENTIAL)
 restrictions
 0,
 collaboration
 outstation
 Gaps
 no
 S
 0
```

This SWISS-PROT entry is copyright. It is produced through a collable between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions

a collaboration

outstation

on

SO TITE

```
RESULT 11
YOAB_ECOLI
 Query Match
Best Local
 Matches
 use by modified
 "A 460-kb DNA sequence of the Escherichia corresponding to the 40.1-50.0 min region DNA Res. 3:379-392(1996).
 Itoh T., Aiba H., Baba T., Fujita K., Hayashi K., Inada T., Isono K. Kasai H., Kimura S., Kitakawa M., Kitagawa M., Makino K., Miki T., Mizobuchi K., Mori H., Mori T., Motomura K., Nakade S., Nakamura Y., Nashimoto H., Nishio Y., Oshima T., Saito N., Sampei G., Seki Y., Sivasundaram S., Tagami H., Takeda J., Takemoto K., Wada C., Yamamoto Y., Horiuchi T.;
 Science
 Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J.
 P76258;
15-JUL-1999
 CARBOHYD
SEQUENCE
 entities
 between
 This
 MEDLINE=97251358; PubMed=9097040;
 SEQUENCE FROM N.A.
 Hypothetical
YOAB OR B1809
 15-JUL-1999
16-OCT-2001
 SGD;
 STRAIN=K12 / MG1655;
MEDLINE=97426617; PubMed=9278503;
 SEQUENCE FROM N
 Escherichia
 Bacteria;
 Escherichia
 use by non-profit institutions as long as its content modified and this statement is not removed. Usage by ar
 Mau B., Shao Y.;
 Pfam; PF00083; sugar_tr; 1.
Hypothetical protein: Repeat; Transmembrane; Sugar transport;
 EMBL;
 or send an email to license@isb-sib.ch).
 entities requires a
 YOAB_ECOLI
 DOMAIN
 Transport;
 TRANSMEM
 InterPro;
 40
 Local Similarity
 Н
 European Bioinformatics Institute. The by non-profit institutions as long
 SIMILARITY: BELONGS
 complete genome sequence ace 277:1453-1474(1997).
 SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EN
 NLDA 4
 NLDA
 S0001432; HXT12
 Z46881; CAA87021.1; -.
 4
 and this statement requires a license
 Proteobacteria;
 IPR003662;
 57
78
87
109
 9 (Rel. 38, Create
9 (Rel. 38, Last
1 (Rel. 40, Last
 Glycoprotein.
 coli.
 Conservative
 protein
 AA;
 STANDARD;
 109
87
 11638
 license agreement (See http://www.isb-sib.ch/announce/
 уоав.
 100.0%;
 sub_transporter
 Last annotation
 Created)
 TO THE UPF0076 (UK114) FAMILY.
 M.
 gamma subdivision; Enterobacteriaceae;
 sequence update)
itions as removed. Usage by is not removed. Usage by
 0;
 N-LINKED (GLCNAC. . .) (P; B9316C3626558434 CRC64;
 Score 20;
Pred. No.
 POTENTIAL.
EXTRACELLULAR (POTENTIAL)
 of.
 CYTOPLASMIC
 PRT;
 Mismatches
 Escherichia coli K-12.";
 114 AA
 There are no
 1.1e+02
 coli K-12
on the lin
 DВ
 (POTENTIAL)
 as its content
 Length 109
 linkage
 Indels
 bУ
 genome
 (POTENTIAL).
 restrictions
 isb-sib.ch/announce,
 and
 and
 EMBL
 map.";
 Miki T.,
 a collaboration
 tor
 0;
 in
 outstation
 nı
 <.
 commercial
 Gaps
 no
 9
 no
 0
```

밁 Q

Complete METAL

ProDom; PD004282; ACPS; 1. TIGRFAMS; TIGR00516; acpS; TIGRFAMS; TIGR00556; pante

acpS; 1. pantethn\_

Pfam; PF01648; ACPS;

Iransferase; Lipid synthesis;

Fatty trn;

acid biosynthesis; Magnesium;

ï

proteome.

SEQUENCE

119

AA;

13421

WW;

MAGNESIUM (BY SIMI)
MAGNESIUM (BY SIMI)
2279E552549041C9

(BY SIMILARITY).
(BY SIMILARITY).
(2549041C9 CRC64;

```
В
 8
 RESULT
 Query Match
 Matches
 use by non-profit institutions as long a modified and this statement is not removed. entitles requires a license agreement (see lor send an email to license@isb-sib.ch).
 This SWISS-PROT entry is copyright It is produced through between the Swiss Institute of Bioinformatics and the Ew the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content
 STRALN=C-125 / JCM 9153;
MEDLINE=20512582; PubMed=11058132;
Takami H., Nakasone K., Takaki Y., Maeno
Fuji F., Hirama C., Nakamura Y., Ogasawar
 Holo-[acyl-carrier protein] synthase (EC 2.7.8.7) (Holo-ACP synthase) (4'-phosphopantetheinyl transferase acps).
 BACHD
 InterPro; IPR002582;
InterPro; IPR004568;
 EMBL; AP001508; BAB04237.1; -.
 Horikoshi K.;
 SEQUENCE FROM N.A
 Bacillus halodurans.
Bacteria; Firmicutes;
 15-JUN-2002 (Rel. 41, Last sequence up 15-JUN-2002 (Rel. 41, Last annotation
 Q9KFG1;
15-JUN-2002
 ACPS_BACHD
 PROSITE; PS01094; UPF0076; 1. Hypothetical protein; Complete SEQUENCE 114 AA; 12493 MW;
 EcoGene; EG13514; yoaB.
InterPro; IPR000543; Yj
Pfam; PF01042; UPF0076;
 "Complete genome sequence of the alkaliphilic
 EMBL; D90825;
HSSP; P37552;
 EMBL; AE000275; AAC74879.1;
 or send an email to license@isb-sib.ch).
 12
 30
 Local
 1 NLDA 4
 FAMILY.
 NLDA 33
 Similarity
 Conservative
 BAA15618.1;
 1009
 STANDARD;
 Pantethn_trn
 ACPS.
 100.0%;
 YjgF-like
 Created)
 Bacillales;
 ALT_INIT
 0;
 ALT_INIT.
 Score
Pred
 proteome.
CB276C49F32AB754 CRC64;
 Mismatches
 Ogasawara
 Bacillaceae;
 NO:
 update;
 119
 (See http://www.isb-sib.ch/announce/
 There are no restricting as its content is
 1.1e+02;
 G
 A
 DΒ
 z :
 , Sasaki R., M
 1;
 Usage
 bacterium
th Bacillus
 Length 114;
 Indels
 δĀ
 Bacillus
subtilis.
 and
 Masui N.,
 EMBL
 from coenzyme
 D
 adenosine
 0
 collaboration
 outstation
 Gaps
 no
 its
 0,
```

```
RESULT 13
SY24_HUMAN
밁
 Ş
 Query Match
Best Local S
Matches 4
 SEQUENCE FROM N.A.
Jones K., Graves T.,
Submitted (JUN-1998)
 White J.R., Imburgia C., Dul E., Appelbaum E., O'Donnell K., O'Shannessy D.J., Brawner M., Fornwald J., Adamou J., Elshourbagy N.A., Kaiser K., Foley J.J., Schmidt D.B., Johanson Macphee C., Moores K., McNulty D., Scott G.F., Schleimer R.P.,
 TISSUE=Monocytes;
MEDLINE=97258609; PubMed=9
Patel V.P., Kreider B.L.,
Nardelli B., Pippalla V.,
 Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
 STRUCTURE BY NMR.
MEDLINE=20374512; Pub.
Mayer K.L., Stone M.J.
 "Cloning and functional characterization of a that binds to the CCR3 receptor and activates J. Leukoc. Biol. 62:667-675(1997).
 TISSUE=Monocytes;
MEDLINE=98030404; PubMed=9365122;
 "Molecular and functional characterization of two chemokines as inhibitors of two distinct classes
 30-MAY-2000 (Rel.
15-JUN-2002 (Rel.
-
 "cDNA, genomic organisation
(eotaxin-2) gene.";
 SEQUENCE OF 3-117
 Sarau H.M.;
 SEQUENCE FROM N.A.,
 Gentz R., Garotta G.
 SEQUENCE FROM N.A.,
 NCBI_TaxID=9606;
 SCYA24 OR MPIF2.
 Small inducible cytokine
 15-JUL-1999
 SY24_HUMAN
 inhibitory factor-2)
 92
 Local Similarity
les 4; Conserv
 Exp. Med. 185:1163-1172(1997).
 LINE. BINDS TO CCR3.
SUBCELLULAR LOCATION:
TISSUE SPECIFICITY: A
 solution structure and receptor
 NLDA
 NLDA 4
 Theran
N-GLYCOSYLATED
 (JAN-1998)
 95
 Conservative
 STANDARD;
 FROM N.A.

 Jest sequence update)
 Last annotation update)
 Last annotation (CCL24) (Myeloid progenitor ytokine A24 precursor (CCL24) (Myeloid progenitor (MPIF-2) (CK-beta-6) (Eotaxin-2).

 PubMed=9104803;
er B.L., Li Y., Li
alla V., Gentz S.,
 PubMed-10913244;
 AND SEQUENCE
 AND
 Duckels
to the E
 100.0%;
 6
 the
 SEQUENCE
 ACTIVATED
 Secreted
 and chromosomal location of the
 EMBL/GenBank/DDBJ
 0;
 G., Fronick W.;
EMBL/GenBank/DDBJ
 Score 20; DB
Pred. No. 1.2
); Mismatches
 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
 Li
 OF.
 QĘ
 MONOCYTES
 H., Leung
Thotakura
 N-TERMINUS
 27-41
 peptide binding
 1.2e+02;
 A
 В
 AND
 AND
 two
 R . ,
 databases
 databases
 novel human CC chemokine human eosinophils.";
 0
 ACTIVATED
 Length 119;
 of.
 Salcedo T
Parmelee
 novel human C-C
 myeloid
 of
 the
 EOSINOPHILS
 T.,
e D.,
 MPIF-2
 S
 0
 OF,
 Gaps
 ...
.
 CELL
 0
```

```
AZUP_PARDE
ID AZUP_P
ACUP_P
ACUP_P
ACUP_P
ACUP POST
ACUP POST
DT 01-OCT
DT 15-JUL
DE PSEUDO
OS PATACO
OC P
 뫄
 δÃ
 RESULT 14
 Matches
 Query Match
Best Local
 P80649;
01-OCT-1996 (Rel. :
01-OCT-1996 (Rel. :
15-JUL-1998 (Rel. :
 DISULFID
DISULFID
CARBOHYD
CONFLICT
CONFLICT
SEQUENCE
 STRAIN-NCIMB 8944;
MEDLINE-97184655; PubMed-9032456;
Leung Y.-C., Chan C., Reader J.S., Willi
Ferguson S.J., Radford S.E.;
"The pseudoazurin gene from Thiosphaera
upstream putative regulatory sequences a
 This SWI
between
 Escherichia coli.";
Biochem. J. 321:699-705(1997).
-i- FUNCTION: THIS SOLUBLE ELE
 modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
 Paracoccus denitrificans.
Bacteria; Proteobacteria;
 AZUP_PARDE
 PROSTITE; PS00477; SMAIL_CYTOKINES_CC; FALSE_NEG.
CYTOKine. Chemotaxis; Signal; Glycoprotein; Inflammatory response;
 Pfam; PF00048; IL8; 1.
SMART; SM00199; SCY; 1
 InterPro; IPR000827; CC_chemkine_sml.
InterPro; IPR001811; Chemokine_IL8.
 InterPro; IPR000923;
InterPro; IPR001235;
 HSSP; P80401;
 SEQUENCE
 NCBI_TaxID=266;
 Pseudoazurin
 CHAIN
 SIGNAL
 Genew; HGNC:10623;
 EMBL;
 EMBL;
 EMBL;
 modified
 the European Bioinformatics Institute.
 3D-structure.
 88
 1 NLDA
 SUBCELLULAR LOCATION: I
 FUNCTION: THIS SOLUBLE ELECTRON TRAN
REQUIRED FOR THE INACTIVATION OF COL
REDUCTASE IN THE PRESENCE OF OXYGEN
 C-C) (CHEMOKINE CC)
 SIMILARITY: BELONGS TO THE
 NLDA 91
 1EIG; 06-DEC-00.
1EIH; 06-DEC-00
 SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EN
 U85768; AAB51135.1; -. AC005102; AAD15410.1; -. AJ223461; CAA11383.1; -.
 Similarity 4; Conserv
 non-profit institutions as long as its content
 4
 119
 1
27
33
34
115
61
73
 Conservative
00923; BlueCu_1.
01235; Copper_blue.
copper-bind; 1.
 Α
 STANDARD;
 SCY; 1.
 34,
36,
 26
119
58
74
115
61
 SCYA24
 13133
 100.0%;
 Last
Last
 Created)
 Ž
 Periplasmic (By similarity).
L PLASTOCYANIN-LIKE DOMAIN.
 alpha subdivision;
 ELECTRON TRANSFER COPPER PRIVATION OF COPPER-CONTAINING
 sequence update)
annotation update)
 0;
 Ŧ۶
 N-LINKED (GLCNAC.
 Score
Pred.
 SMALL
 PRT;
 -> G (IN REF. 1).
-> S (IN REF. 1;
6CAACA61731FB393
 INTERCRINE BETA FAMILY (SMALL CYTOKINE
 Mismatches
 Willis A.C.,
 INDUCIBLE CYTOKINE
 NO.
 123
 and overexpres
 There are no
 DB 1;
 B
 2e+02;
 overexpression
 http://www.isb-sib.
 Rhodobacter group;
 Usage
 van
 AA SEQUENCE).
CRC64;
 Length 119;
 Indels
 bу
 Spanning R.J.M.,
 analysis
 restrictions
 0;
 for
 collaboration -
 Of
 Gaps
 commercial
 on
 ņ
 0;
```

```
CD59
 Barara
 Вþ
 δã
 RESULT 16
 RESULT 15
Y670_PASMU
 밁
 20
 SO SO
 Query Match
Best Local
 Matches
 Query Match
Best Local
 CD59_RAT STANDARD; PRT; 1
P27274;
01-AUG-1992 (Rel. 23, Created)
01-NOV-1997 (Rel. 35, Last sequence up
30-MAY-2000 (Rel. 39, Last annotation
CD59 glycoprotein precursor (Membrane
 15-JUN-2002
15-JUN-2002
15-JUN-2002
 RAT
 between the Swiss Institute of Bioinformatics and the EMBL outstation -
the European Bioinformatics Institute. There are no restrictions on its
use by non-profit institutions as located is in no way
modified and this statement is not removed. Usage by and for commercial
entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
 SEQUENCE
 Hypothetical protein; SIGNAL 1 2:
 This SWISS-PROT entry is copyright. It is produced through a collaboratic between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no was
 MEDLINE-21145866; PubMed-11248100; May B.J., Zhang Q., Li L.L., Paustian M.L., Whittam T.S., "Complete genomic sequence of Pasteurella multocida Pm70. Proc. Natl. Acad. Sci. U.S.A. 98:3460-3465(2001).
-: SIMILARITY: BELONGS TO THE CYTOCHROME B562 FAMILY.
 METAL
SEQUENCE
 Copper;
 PRINTS; |
ProDom; |
PROSITE;
 EMBL; AE006103; AAK02754.1;
 SEQUENCE FROM N.A.
 Pasteurella.
 Bacteria; Proteobacteria;
 PM0670.
 Hypothetical
 Q9CMY0;
 Y670_PASMU
 Pasteurella multocida.
 METAL
 101
 Local
 98 NLDA 101
 1 NLDA 4
 NLDA
 NLDA 4
 E; PS00196; COPPER_BLUI

REPORT TAINSPORT; I

5 93

40 40

78 78

81 81

81 81

86 86

CE 123 AA; 13337 MW;
 4;
 Similarity
 PR00156; C
 4;
 Similarity
 104
 24
124 /
 (Rel.
(Rel.
(Rel.
 100.0%; ilarity 100.0%; Conservative 0
 (Rel. 41, Created
(Rel. 41, Last se
(Rel. 41, Last an
(Rel. 41, PM0670 p
 100.0%;
ilarity 100.0%;
Conservative
 AA;
 STANDARD;
 COPPERBLUE
39, Last annotation update)precursor (Membrane attack complex inhibition
 Copper_blue;
COPPER_BLUE;
 124
13746
 Created)
Last sequence update)
Last annotation update)
 Signal;
 MW;
 , WM
 gamma
 0;
 0;
 precursor
 Periplasmic
 COPPER
COPPER
COPPER
 Score 20;
Pred. No.
 HYPOTHETICAL
 POTENTIAL
 Score 20; DE
Pred. No. 1.2
0; Mismatches
 Complete proteome.
 COPPER (BY SIMILARITY).
COPPER (BY SIMILARITY).
COPPER (BY SIMILARITY).
COPPER (BY SIMILARITY).
983800FB8B5589E2 CRC64;
 PLASTOCYANIN-LIKE
 D7B2B485C7B51B9A CRC64;
 Mismatches
 subdivision; Pasteurellaceae;
 update)
 124
 126
 1.2e+02;
 ΑA
 DB 1;
 æ
 DB 1;
 PROTEIN PM0670
 .2e+02;
s 0;
 0
 Length 124;
 Length 123;
 Indels
 Kapur
 0,
 0;
 collaboration
 Gaps
 Gaps
 0,
 0
```

```
SETERE TERESTREES OF THE PROCESS OF
 Query Match
Best Local S
Matches 4
 DOMAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
SEQUENCE
 Antigen;
SIGNAL
 PROPEP
LIPID
 entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
 This SWISS-PROT entry is copyright. It is produced through a collaborabetween the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on
 EMBL; U48255; AAA88909.1; -. HSSP; P13987; 1CDS.
 modified and this statement
 rat complement.";
Biochem. J. 284:169-176(1992).
-!- FUNCTION: POTENT INHIBITOR
 CHAIN
 PROSITE; PS00983; LY6_UPAR; 1.
 SMART; SM00134; LU;
 ProDom;
 Pfam; PF00021; UPAR_LY6;
 InterPro; IPR001526; InterPro; IPR003632;
 "Isolation and characterization of erythrocytes which inhibits lysis t
 Morgan B.P.;
 TISSUE=Erythrocyte;
MEDLINE=92286999; P
 Rushmere N.K., Harrison R.A., van den Berg C.W., Morgan B.P., "Molecular cloning of the rat analogue of human CD59: structural comparison with human CD59 and identification of a putative acti
 SEQUENCE FROM N.A., AND SEQUENCE OF 23-64. STRAIN=Sprague-Dawley; TISSUE-Kidney; MEDLINE-95091697; PubMed-7528012;
 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10116;
 Hughes
 SEQUENCE FROM N.A.,
 Rattus norvegicus (Rat).
 SEQUENCE OF
 Biochem.
 factor) (MACIF) (MAC-inhibitory protein)
44
 1 NLDA
 PTM: N-GLYCOSYLATED.
SIMILARITY: CONTAINS 1 UPAR/LY6 DOMAIN.
NLDA
 SUBCELLULAR LOCATION: Attached
 COMPLEX (MAC) ACTION.
 ASSEMBLY
 Type of the control o
 T.R., Piddlesden
 Similarity
 PD003128;
 ٦.
 47
 4
 Conservative
 304:595-601(1994).
 Ly-6_CD59; 1.
 PubMed=1376109;
 100.0%;
 institutions as long as atement is not removed. U
 LY6_UPAR.
 INHIBITOR OF TION. ACTS
 GPI-anchor;
 S.J., Willams
 MW;
 _CD59.
 UPAR/LY6.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.
 0,
 GPI-ANCHOR (BY
 Score
Pred!
 REMOVED IN MATURE FORM (BY SIMILARITY).
GPI-ANCHOR (BY SIMILARITY).
 R OF THE
 Craniata; Vertebrata;
Sciurognathi; Muridae;
 54B9C58AB2073005
 Mismatches
 GLYCOPROTEIN.
 f a membrane protein from by the membrane attack co
 signal.
 to the membrane by a GPI-anchor
 NO.
 20;
 AFTER
 COMPLEMENT MEMBRANE I
 J.D.,
 1.2e+02;
 DB 1;
 (MAC-IP) (Protectin).
 Harrison
 its content
 Length 126;
 CRC64;
 Indels
 attack complex of
 putative active
 (POTENTIAL)
 Euteleostomi;
; Murinae; Rattus.
 ATTACK
 a collaboration
 OF.
 0;
 MAC
 outstation
 0,
```

RESULT 17 PFD4\_CAEEL

뭕 Qγ

```
Š
 RESULT 18
FLSA_PSEAE
 밁
 Query Match
Best Local S
Matches 4
 STRAIN-Bristol N2;

Kohara Y., Shin'i T., Suzuki Y., Sugano S., Potdevin M.,

Thierry-Mieg Y., Thierry-Mieg D., Thierry-Mieg J.;

Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.

-1- FUNCTION: BINDS SPECIFICALLY TO CYTOSOLIC CHAPERONIN (C-CPN) AND

TRANSFERS TARGET PROTEINS TO IT. BINDS TO NASCENT POLYPEPTIDE

CHAIN AND PROMOTES FOLING IN AN ENVIRONMENT IN WHICH THERE ARE

MANY COMPETING PATHWAYS FOR NONNATIVE PROTEINS (BY SIMILARITY).

MANY COMPETING PATHWAYS FOR TWO DERI-ALPHA TYPE AND FOUR PFD-BETA
 Q17435;
16-OCT-2001
16-OCT-2001
15-JUN-2002
 FLSA_PSEAE
033422;
 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no was modified and this statement is not removed. Usage by and for commercial
MEDLINE-98147712; PubMed-9488388;
Arora S.K., Ritchings B.W., Almira E.C.,
"The Pseudomonas aeruginosa flagellar car
responsible for mucin adhesion.";
 15-JUL-1999 (Rel. 38, Created)
15-JUL-1999 (Rel. 38, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation update)
A-type flagellar protein flis.
 entities requires
or send an email t
 Chaperone.
 SEQUENCE FROM N.
 SEQUENCE FROM N.A.
STRAIN-Bristol N2;
 Eukaryota; Metazoa;
Rhabditidae; Pelode:
 SEQUENCE FROM
 NCBI_TaxID=287;
 Pseudomonas
 Bacteria;
 Pseudomonas aeruginosa
 WormPep; B0035.4; CE05162.
 Submitted
 White
 NCBI_TaxID=6239;
 Caenorhabditis elegans.
 Probable prefoldin
 PFD4_CAEEL
 121
 SIMILARITY: BELONGS
 SUBUNIT: HETEROHEXAMER OF TWO PFD-ALPHA TYPE AND TYPE SUBUNITS (BY SIMILARITY).
 NLDA
 NLDA 4
 Z73102; CAA97410.1; -. AF292051; AAG41147.1;
 S
 Similarity
4; Conser
 s requires a license agreement (See http://www.isb-sib.ch/announce/
an email to license@isb-sib.ch).
 124
 Proteobacteria;
 (MAY-1996)
 126
 100.0%; illarity 100.0%; Conservative 0
 (Rel. 40, Created)
(Rel. 40, Last seg
(Rel. 41, Last ann
 Peloderinae;
 8
 STANDARD;
 STANDARD;
 subunit
 Nematoda; Chromadorea;
 14031 MW;
 ç
 TO THE PREFOLDIN BETA SUBUNIT FAMILY
 the EMBL/GenBank/DDBJ
 Caenorhabditis
 gamma
 4
 sequence u
 0;
 Score 20; DE
Pred. No. 1.7
); Mismatches
 PRT;
 22D8B5B370AB4DE8 CRC64;
 subdivision; Pseudomonadaceae;
 on update)
 132
 126
 cap
 1.2e+02;
thes 0;
 Lory S., Ramphal
p protein, FliD,
 B
 DB 1;
 ₽
 Rhabditida; Rhabditoidea,
 databases
 Length 126;
 FOUR
 1s;
 0;
 collaboration
 Gaps
 its
 0;
```

```
RESULT 19
Y044_BORBU
 밁
 οy
 Query Match
Best Local
Matches
 use by non-
modified and
 Fraser C.M., Casjens S., Huang W.M., Sutton G.G., Clayton R.A. Lathigra R., White O., Ketchum K.A., Dodson R., Hickey E.K., C Dougherty B., Tomb J.-F., Fleischmann R.D., Richardson D., Peterson J., Kerlavage A.R., Quackenbush J., Salzberg S., Hans van Vugt R., Palmer N., Adams M.D., Gocayne J.D., Weidman J., Ulterback T., Watthey L., McDonald L., Artiach P., Bowman C., Garland S., Fujii C., Cotton M.D., Horst K., Roberts K., Hatch Smith H.O., Venter J.C.;
"Genomic sequence of a Lyme disease spirochaete, Borrelia"
 15-DEC-1998
15-DEC-1998
16-OCT-2001
 Flagella.
SEQUENCE
 the European Bioinformatics Institute. The was by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See
 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
 SEQUENCE FROM N.A.
STRAIN=ATCC 35210 / B31;
MEDLINE=98065943; PubMed=9403685;
 Borrelia burgdorferi (Lyme disease spirochete)
Bacteria; Spirochaetales; Spirochaetaceae; Bor
 Y044_BORBU
O51073;
 EMBL;
 EMBL;
 or send
 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El
 in Pseudomonas aeruginosa.";
Infect. Immun. 68:1474-1479(2000).
 STRAIN=PAK, PA103, CS2, and CS32;
MEDLINE=20143761; PubMed=10678962;
Arora S.K., Dasgupta N., Lory S., Ramp
"Identification of two distinct types
 Infect.
[2]
 Hypothetical
 EMBL;
 -!- FUNCTION: NOT KNOWN.
 Nature
 Pfam;
 EMBL;
 EMBL;
 SEQUENCE FROM
 NCBI_TaxID=139;
 FIGREAMS;
 InterPro;
 78
 \vdash
 Match
 L81176; AAC09392.1; -.
AF139822; AAF35978.1; -.
AF139823; AAF35980.1; -.
AF139824; AAF35982.1; -.
AF139825; AAF35984.1; -.
 FUNCTION: NOT KNOWN
 NLDA 4
 NLDA
 Pro; IPR003713; Flis. PF02561; Flis; 1.
 390:580-586(1997).
 Similarity
 an email to license@isb-sib.ch).
 Immun.
 81
 TIGR00208;
 132
 (Rel.
(Rel.
(Rel.
 100.0%;
llarity 100.0%;
Conservative (
Bioinformatics Institute. The Bioinformatics Institutions as long profit institutions as long this statement is not removed.
 protein
 N.A.
 ΑA;
 66:1000-1007(1998).
 STANDARD;
 37,
37,
 14250 MW;
 license agreement (See http://www.isb-sib.ch/announce/
 flis;
 Last sequence up
 Created)
 0
 Score 20; DB 1;
Pred. No. 1.3e+02;
; Mismatches 0;
 B8BC95E1890533D3 CRC64;
 Ramphal R.;
ypes of flagellar cap
 on update)
 FAMILY.
 There are no rest
 There are no rest
 Ā
 Usage
 Length 132;
 Clayton R.A., ickey E.K., Gwinn rdson D.,
 γď
 γď
 restrictions
 restrictions
 proteins,
 and
 and
 EMBL
 Hatch
 Hanson
 a collaboration
 for
 for
 0;
 outstation
 Gaps
 commercia:
 .
 X
 on
 ö
 9
 its
 0,
```

```
RESULT 20
AZUP_PARPN
 В
 Qy
 SPERFCCC
 Query Match
Best Local
 Matches
 STRAIN=ATCC 35512 / LMD 82.5;
MEDLINE-95289994; PubMed-7772045;
Chan C., Willis A.C., Robinson C.V.,
Ferguson S.J.;
"The complete smi-
 AZUP_PARPN
P80401;
01-FEB-1995
15-JUL-1998
15-JUN-2002
 EMBL; 273141;
EMBL; 270033;
 the
 This SWISS-PROT entry is copyright. It is produced through a collaboration
 Submitted
 MEDLINE-97184655; PubMed-9032456;
Leung Y.-C., Chan C., Reader J.S., Willi
Ferguson S.J., Radford S.E.;
"The pseudoazurin gene from Thiosphaera
upstream putative regulatory sequences a
 entities
or send a
 or send
 Williams
 pseudoazurin in Thiosphaera pa
Biochem. J. 308:585-590(1995).
 SEQUENCE FROM N.A.,
STRAIN-ATCC 35512 /
 Hypothetical protein; TRANSMEM 11 3
 Biochem.
 Escherichia
 Bacteria; Proteobacteria;
 Paracoccus
 Pseudoazurin
 TIGR;
 -RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS).
 44 NLDA 47
 Local Similarity
 ween the Swiss Institute of Bioinformatics and the EMBL European Bioinformatics Institute. There are no restrict by non-profit institutions as long as its content is ified and this statement is not removed. Usage by and fo ities requires a license agreement (See http://www.isb-sib.send an email to license@isb-sib.ch).
 1 NLDA 4
 SUBUNIT: HOMODIMER.
SUBCELLULAR LOCATION: Periplasmic.
SIMILARITY: CONTAINS 1 PLASTOCYANIN-LIKE DOMAIN.
 nitted (FEB-1997) to the PDB data bank.
FUNCTION: THIS SOLUBLE ELECTRON TRANSFER COPPER PROTEIN IS REQUIRED FOR THE INACTIVATION OF COPPER-CONTAINING NITRITE REDUCTASE IN THE PRESENCE OF OXYGEN.
 1ADW;
 complete amino acid sequence confirms doazurin in Thiosphaera pantotropha.";
 BB0044;
 AE001118; AAC66442.1;
 P.A.
 4.
 s requires
an email t
 pantotrophus
 133 AA;
 coli.";
321:699-705(1997).
 (Rel. 31, Created)
(Rel. 36, Last sequence update)
(Rel. 41, Last annotation update)
 Conservative
 precursor.
 CAA97485.1;
CAA93848.1;
 STANDARD;
 to.
 AND SEQUENCE OF LMD 82.5;
 license agreement (See http://www.isb-sib.ch/announce/
license@isb-sib.ch).
 BlueCu_1
 16052 MW;
 100.0%;
 Transmembrane; Complete
1 POTENTIAL.
 (Thiosphaera pantotropha).
a; alpha subdivision; Rhodobacter group;
 0;
 Score 20;
Pred. No.
 PRT;
 A57686EA30F1959B CRC64;
 Mismatches
 Willis
 23-32
 Aplin R.T., Radford S.E.,
 145
 and overexpression
 There are no restrictions
 pantotropha:
 1.3e+02;
 DB
 A.C.,
 the
 0;
 proteome
 presence of
 van
 Length 133;
 Indels
 Spanning R.J.M.,
 for
 0;
 outstation -
 .ch/announce/
 Gaps
 ö
 way
 0;
 Вþ
 Qy
 SQ PTT TTT X DR DR R
Pfam; PF00072; response_reg; 1. |
ProDom; PD000039; Response_reg; 1. |
PROSITE; PS50110; RESPONSE_REGULATORY; 1.
Sporulation; DNA-binding; Transcription regulation; Repressor; Phosphorylation; Sensory transduction.
NON_TER 1
```

EMBL; U09972; AAA18873.1; HSSP; P52934; 1QMP.

InterPro;

IPR001789; Response\_reg.

Activator;

```
RESULT 21
SPOA_BACCE
 Query Match
Best Local
 Matches
use by non-profit institutions as lon-
modified and this statement is not remove
entities requires a license agreement (So
or send an email to license@isb-sib.ch).
 Clostridium species identifies a probable DNA binding domain.";

wol. Microbiol. 14:411-426(1994).

"In Microbiol. 14:411-426(1994).

"In Microbiol. 14:411-426(1994).

"In Control 10: May PLAY THE CENTRAL, REGULATORY ROLE IN SPORULATION MAY BE AN ELEMENT OF THE EFFECTOR PATHWAY RESPONSIBLE FOR THE ACTIVATION OF SPORULATION GENES IN RESPONSE TO NUTRITIONAL SPOOM MAY ACT IN CONCERT WITH SPOOH. A SIGMA FACTOR) TO CONTROL SPOOM MAY ACT IN CONCERT WITH SPOOH.

"THE EXPRESSION OF SOME GENES THAT ARE CRITICAL TO THE SPOON.

"THE EXPRESSION OF ABRB, ACTIVATOR OF THE SPOILA OPERON.

"THE DNA SEQUENCE 5'-TONCGAA-3' (OA BOX) (BY SIMILARITY).

"I'- SUBCELLULAR LOCATION: CYCOPLASMIC (Probable).

"I'- PTM: PHOSPHORYLATED BY KINA AND KINB (BY SIMILARITY).

"I'- SIMILARITY: CONTAINS 1 RESPONSE REGULATORY DOMAIN.
 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Extremental Burdean Bioinformatics Institute. There are no restructed by non-profit institutions as long as its content
 Bacillus cereus.
Bacteria; Firmicutes;
 Stage 0 sporulation protein A (Fragment).
 01-OCT-1996
15-JUN-2002
 "Characterization of spo0A homologues in diverse Bacillus Clostridium species identifies a probable DNA-binding dome
 Youngman P
 Brown D.P., Ganova-Raeva L.,
 MEDLINE=95191392; PubMed=7885226;
 STRAIN-NRRL
 SEQUENCE FROM
 NCBI_TaxID=1396;
 SPOOA
 01-OCT-1996
 SEQUENCE
 METAL
METAL
METAL
 CHAIN
 METAL
 Copper; Electron transport; Signal; Periplasmic; 3D-structure. SIGNAL 1 22
 DOMAIN
 ProDom;
 PRINTS;
 Pfam; PF00127;
 InterPro; IPR001235; Copper_blue
 PROSITE;
 120 NLDA 123
 1 NLDA 4
 BACCE
 PD001235; Copper_blue; PS00196; COPPER_BLUE;
 4;
 Similarity
 PR00156;
 (Rel.
 145
 Conservative
 23
27
62
100
103
 108
 ΑA;
 copper-bind
 STANDARD;
 COPPERBLUE.
 34, Created)
34, Last sequence up
41, Last annotation
 145
115
62
100
103
 license agreement (See http://www.isb-sib.ch/announce/
 108
15446 MW;
 100.0%;
 Bacillales;
 is not removed. U
 0;
 Green B.D.,
 COPPER (BY SIMILARITY).
COPPER (BY SIMILARITY).
725ECB5929EC3831 CRC64;
 PLASTOCYANIN-LIKE
COPPER (BY SIMILAI
COPPER (BY SIMILAI
 Score
Pred.
 PSEUDOAZURIN
 PRT;
 Mismatches
 Bacillaceae;
 R (BY SIMILARITY).
R (BY SIMILARITY).
R (BY SIMILARITY).
R (BY SIMILARITY).
 NO:
 150
 1.4e+02
 Wilkinson
 Å
 DВ
 1;
 Usage
 Bacillus
 Length 145;
 Indels
 S.R.,
 bУ
 restrictions
 SPORULATION.
IBLE FOR THE
 and
 EMBL
 Young
 SPORULATION PERON. BINDS
 and
 a collaboration -
 for
 CONTROL
 0;
 outstation
 STRESS.
 Χ,
 Gaps
 T
 0;
```

```
RESULT
ISPF_LI
 망
 Š
 ST THE
 Matches
 Query Match
Query Match
 Glaser P., Frangeul L., Buchrieser C., Rusniok C., Amend A.,
Baquero F., Berche P., Bloecker H., Brandt P., Chakraborty T.,
Charbit A., Chetouani F., Couve E., de Daruvar A., Dehoux P.,
Domann E., Dominguez Bernal G., Duchaud E., Durant L., Dussurget O.,
Entlan K.-D., Fsihi H., Garcia-del Portillo F., Garrido P.,
Gautier L., Goebel W., Gomez-Lopez N., Hain T., Hauf J., Jackson D.,
Jones L.-M., Kaerst U., Kreft J., Kuhn M., Kunst F., Kurapkat G.,
Madueno E., Maitournam A., Mata Vicente J., Ng E., Nedjari H.,
Nordsiek G., Novella S., de Pablos B., Perez-Diaz J.-C., Purcell R.,
Remmel B., Rose M., Schlueter T., Simoes N., Tierrez A.,
Vazquez-Boland J.-A., Voss H., Wehland J., Cossart P.;
"Comparative genomics of Listeria species.";
Science 294:849-852(2001)
 DNA_BIND
 EMBL; AL596164; CAC95501.1; -. ListiList; LIN00268; -. InterPro; IPR004423; IspF. InterPro; IPR003526; YgbB.
 entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
 the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
 SEQUENCE FROM N.A.
STRAIN-CLIP 11262 / Serovar 6a;
MEDLINE-21537279; PubMed=11679669;
 Listeria innocua.
Bacteria; Firmicutes;
 SEQUENCE
 DOMAIN
 TIGREAMS; TICRO0151; is
PROSITE; PS01350; ISPF;
Lyase; Isoprene biosynt
SEQUENCE 157 AA; 172
 between
 This
 ISPF OR LIN0268
 15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
2.C-methyl-D-erythritol 2,4-cyclodiphosphate synthase (EC 4.6.1.12)
 ISPF_LISIN
 MECPS) (MECDP-synthase).
 85 NLDA 88
 Local
 1 NLDA 4
 FUNCTION: Converts 4-diphosphocytidyl-2C-methyl-D-erythritol 2-phosphate into 2C-methyl-D-erythritol 2.4-cyclodiphosphate and CMP. Also converts 4-diphosphocytidyl-2C-methyl-D-erythritol into 2C-methyl-D-erythritol 3,4-cyclophosphate and CMP (By similarity). CATALYTIC ACTIVITY: 2-phospho-4 (cytidine 5'-diphospho)-2-C-methyl-D-erythritol -2-C-methyl-D-erythritol -2-C-methyl-D-erythritol -2-C-methyl-D-erythritol -2-C-methyl-D-erythritol -2,4-cyclodiphosphate
 PATHWAY: Nonmevalonate terpenoid biosyr SIMILARITY: BELONGS TO THE ISPF FAMILY
 SWISS-PROT entry is copyright. It is produced through a collaboratic sen the Swiss Institute of Bioinformatics and the EMBL outstation
 PF02542; YgbB;
 CMP
 Isoprene biosynthesis;
E 157 AA; 17228 MW;
 Similarity 4; Conserv
 <1
132
150
150 AA;
 Conservative
 STANDARD;
 59
>150
150
 100.0%;
 ispF; 1.
 Bacillales; Listeriaceae; Listeria
 WW;
 terpenoid biosynthesis pathway;
 0;
 RESPONSE REGULATORY.
H-T-H MOTIF (POTENTIAL).
 Score
Pred.
 Complete proteome. 03E0B036A53E4C14 CRC64;
Score 20;
 17E977501F151D35 CRC64;
 Mismatches
 ŏ.
 20;
 157
 There are no restrictions ng as its content is in
 1.5e+02;
 DB
DB 1;
 Length 150;
Length 157;
 Indels
 fifth step
 0;
 collaboration
 Gaps
 no
 0
n
 way
 0;
```

```
멍
 QΥ
 В
 Qγ
 RESULT
 Query Match
Best Local S
Matches 4
 Matches
 Best
 Charbit A., Chetouani F., Couve E., de Daruvar A., Dehoux P.,
Domann E., Dominguez-Bernal G., Duchaud E., Durant L., Dussurget O.,
Entian K.-D., Fsihi H., Garcia-del Portillo F., Garrido P.,
Gautier L., Goebel W., Gomez-Lopez N., Hain T., Hauf J., Jackson D.,
Jones L.-M., Kaerst U., Kreft J., Kuhn M., Kunst F., Kurapkat G.,
Madueno E., Maitournam A., Mata Vicente J., Ng E., Nedjari H.,
Nordsiek G., Novella S., de Pablos B., Perez-Diaz J.-C., Purcell R.,
Nordsiek G., Rose M., Schlueter T., Simoes N., Tierrez A.,
Vazquez-Boland J.-A., Voss H., Wehland J., Cossart P.;
"Comparative genomics of Listeria species.";
Science 294:849-852(2001)
 Pfam; PF02542; YgbB; 1.
TIGRFAMs; TIGR00151; ispF; 1.
PROSITE; PS01350; ISPF; 1.
 modified and this statement entities requires a license
 the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
 STRAIN=EGD-e / Serovar 1/2a;
MEDLINE=21537279; PubMed=11679669;
 15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
2-C-methyl-D-erythritol 2,4-cyclodiphosphate
 entities requires a license agreement (So or send an email to license@isb-sib.ch).
 between
 Baquero F., Berche P., Bloecker H., Charbit A., Chetouani F., Couve E.,
 Glaser P., Frangeul
 SEQUENCE FROM N.A
 NCBI_TaxID=1639;
 Bacteria; Firmicutes;
 InterPro; IPR004423; IspF.
InterPro; IPR003526; YgbB.
 ISPF_LISMO
 ListiList; LMO00236;
 ISPF OR LMO0236
 (MECPS)
 L5-JUN-2002
 Local Similarity 100 hes 4; Conservative
 94 NLDA 97
94 NLDA
 Н
 1 NLDA 4
 FUNCTION: Converts 4-diphosphocytidy1-2C-methy1-D-erythritol 2-phosphate into 2C-methy1-D-erythritol 2.4-cyclodiphosphate and CMP. Also converts 4-diphosphocytidy1-2C-methy1-D-erythritol into 2C-methy1-D-erythritol 3.4-cyclophosphate and CMP (By similarity). CATALYTIC ACTIVITY: 2-phospho-4-(cytidine 5'-diphospho)-2-C-methy1-D-erythritol 2-C-methy1-D-erythritol 2.4-cyclodiphosphate
 PATHWAY: Nonmevalonate terpenoid biosynthesis SIMILARITY: BELONGS TO THE ISPF FAMILY.
 NLDA 4
 + CMP
 SWISS-PROT entry is copyright. It is produced through a ceen the Swiss Institute of Bioinformatics and the EMBL
 AL591974; CAD00763.1;
 Isoprene biosynthesis;
CE 157 AA; 17029 MW;
 (MECDP-synthase).
 4;
 Similarity
 100.0%;
llarity 100.0%;
Conservative
 STANDARD;
 ۲.,
 license agreement (See http://www.isb-sib.ch/announce/
 100.0%;
 Created)
 Bacillales; Listeriaceae;
 Buchrieser C., Rusniok C., Amend A. Bloecker H., Brandt P., Chakraborty
 0;
 0
 Pred. No. 1.6e+02;
Mismatches 0;
 Score 20; DB 1;
Pred. No. 1.6e+02;
Mismatches 0;
 Complete proteome. 7C1679D32553FDF8 CRC64;
 157
 There are no
 AA
 as its content
 Usage
 synthase (EC 4.6.1.12)
 Length 157;
 pathway;
 Indels
 Indels
 bу
 restrictions
 and
 ?
 fifth step.
 0;
 for
 0;
 collaboration
 outstation
 Gaps
 ö
 9
 0
 0
```

```
FLAV_CLOSA
ID FLAV
AC P1885
DT 01-NG
DT 01-NG
DT 01-NG
DT 16-OC
DE FLAV
GN FLOX:
OS Clost
OC Bacte
OC Clost
NCBI_
RN [1]
RP SEQUE
RX MEDLJ
RA Santa
RT MEDLJ
RT Elect
RT Lect
RT - Sec
 RESULT 24

NIFX_RHOCA
ID NIFY_R
AC P19078
AC P19078
AC P19078
AC P19078
DT 01-NOV
DT 01-NOV
DT 01-NOV
DT 01-NOV
DT 01-NOV
CO Rhodob
OX NCBI_T
RN [1]
RN SEQUEN
RX MEDLIN
RA MOTENO
RT 11FEN
RT 11FEN
RT 11FEN
RC -1-FU
CC -
 В
 Š
 Query Match
Best Local
 Matches
 FLAV_CLOSA
P18855;
01-NOV-1990
 MEDLINE=91123180; pubMed=1991710;
Santangelo J.D., Jones D.T., Woods
"Metronidazole activation and iso
electron transport genes.";
J. Bacteriol. 173:1088-1095(1991)
 FLOX.
 Nitrogen
SEQUENCE
 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
 EMBL; X17433; CAA35474.1; -. PIR; JE0031; JE0031. InterPro; IPR003731; DUF153.
 SEQUENCE FROM N.A.

MEDLINE-89313674; PubMed-2747620;

MORENO-Vivian C., Schmehl M., Masepohl B., Arnold W., Klipp W.;

"DNA sequence and genetic analysis of the Rhodobacter capsulatus

nifENX gene region: homology between NifX and NifB suggests

involvement of NifX in processing of the iron-molybdenum cofactor

MOL. Gen. Genet. 216:353-363(1989).

-1- FUNCTION: MAY PLAY A ROLE IN THE PROCESSING OF THE IRON-

MOLYBDENUM COFACTOR.
 01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence up
01-NOV-1990 (Rel. 16, Last annotation
 J. Bacteriol.
 SEQUENCE FROM
 NCBI_TaxID=169679;
 Clostridium
 Clostridium saccharob Bacteria; Firmicutes;
 Flavodoxin.
 01-NOV-1990
16-OCT-2001
 CLOSA
 Pfam; PF02579;
 entities requires a license agreement (S or send an email to license@isb-sib.ch).
 Rhodobacter capsulatus (Rhodopseudomonas capsulata).
Bacteria; Proteobacteria; alpha subdivision; Rhodobacter group;
 P19078;
 NIFX_RHOCA
 NCBI_TaxID=1061;
 Rhodobacter
 <u>3</u>1
 SIMILARITY: TO NIFB.
 NLDA 34
 NLDA 4
 protein.
 Similarity
 fixation.
 159
 saccharobutylicum.
irmicutes; Clostridia;
 (Rel. 16, Created)
(Rel. 16, Last sequence (Rel. 40, Last annotation)
 Conservative
 N.A.
 LOW-POTENTIAL ELECTRON
 AA;
 DUF153;
 STANDARD;
 STANDARD;
 17456 MW;
 100.0%;
 Last sequence update)
Last annotation update)
 0;
 Woods
 Score 20;
Pred. No.
 isolation
 PRT;
 PRT;
 8470D344B6C71005 CRC64;
 Mismatches
 Clostridiales; Clostridiaceae;
 U
 update)
 DONOR
 .
R. ;
 160
 159
 (See http://www.isb-sib.ch/announce/
 update)
 of
 1.6e+02;
 ₿
 DB 1;
 A
 TO
 Clostridium
 Þ
 Length 159;
 NUMBER
 Indels
 acetobutylicum
 cofactor.";
 0;
 0,
```

```
RESULT 26
PHEA_SYNY1
 Вb
 Qγ
 Query Match
Best Local
 Matches
Pfam,
ProDom; Puv.
Phycobilisome; Ete
ProDING 82
 PHEA_SYNY1 P20778;
 entities
or send a
 between the Swiss Institute of Bioinformathe European Bioinformatics Institute. The use by non-profit institutions as long
 wild-type and phycobilisome assembly mutants of Synechocystis sp. strain PCC 6701.";
J. Bacteriol. 172:1297-1305(1990).
-i- FUNCTION: LIGHT-HARVESTING PHOTOSYNTHETIC BILE PIGMENT-PROTEIN
 01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last seq
15-JUN-2002 (Rel. 41, Last ann
 HSSP;
 entities requires a license agreement (Some send an email to license@isb-sib.ch).
 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
 Synechocystis sp. (strain PCC 6701)
Bacteria; Cyanobacteria; Chroococca
 between the Swiss Institute of Bioinformat
the European Bioinformatics Institute. The
use by non-profit institutions as long
modified and this statement is not removed.
 modified and this statement is not removed.
 MEDLINE=90170840; PubMed=2106507;
 CPEA OR CPAA.
 C-phycoerythrin alpha chain.
 Electron transport; SEQUENCE 160 AA;
 PIR;
 This SWISS-PROT entry is copyright. It is produ between the Swiss Institute of Bioinformatics
 Pfam; PF00502; Phycobilisome; 1.
 PIR; B35127; B35127.
 EMBL; M33812; AAA27280.1;
 Anderson L.K., Grossman A.R.;
"Structure and light-regulated expression
 Anderson L.K.,
 SEQUENCE FROM N.A.
 NCBI_TaxID=1144;
 PROSITE; PS00201; FLAVODOXIN; 1
 EMBL; M36770; AAA23238.1; -.
 -i- SIMILARITY: BELONGS TO THE FLAVODOXIN FAMILY
 [nterPro;
 PIR; A38177; A38177.
InterPro; IPR001226; Flavodoxin.
 -!- COFACTOR: FMN
 37 NLDA 40
 1 NLDA 4
 FROM THE PHYCOBILIPROTEIN COMPLEX.
SUBUNIT: HETERODIMER OF AN ALPHA AND A BETA CHAIN.
SUBCELIULAR LOCATION: Perliphery of the rods of the phycobilisome
PTM: CONTAINS ONE COVALENTLY LINKED BILIN CHROMOPHORE.
 C.acetobutylicum.
 036005;
 PF00258; flavodoxin;
 4;
 s requires a license agreement (See http://www.isb-sib.ch/announce/
an email to license@isb-sib.ch).
 Similarity
 Cyanobacteria; Chroococcales; Synechocystis
 IPR001659; Phycobilisome
 Conservative
 1B8D.
 STANDARD;
 Flavoprotein;
17763 MW; 61
 100.0%;
 Last sequence update)
Last annotation updat
 .
 0;
 Score 20; I
 PRT;
 6153F8A1F0BCDC8D CRC64;
 Mismatches
 FMN
 It is produced through a
 to originate
 164
 (See http://www.isb-sib.ch/announce/
 update)
 There are no restrictions
 There are no rest
 AA
 DB 1;
1.6e+02;
 of phycoerythrin
nts of Synechocyst
 as its content
 Usage
 Usage
 Length 160;
 and the
 from
 Indels
 γď
 уd
 restrictions
 and
 and
 EMBL outstation
 genes
 18
 for
 0,:
 for
 collaboration
 'n
 Ľ,
 Gaps
 commercia:
 in
 on
 no
 no
 way
 way
 its
 0,
```

PD000340;

Phycobilisome; 1

Electron transport; Photosynthesis;
2 82 PHYCOERYTHROBILIN CHRO
9 139 PHYCOERYTHROBILIN CHRO

PHYCOERYTHROBILIN CHROMOPHORE

Bile pigment.

```
멍
 S
 NUE2_RHIME
 ş
 RESULT
Query Match
Best Local Similarity
 Query Match
Best Local
 Matches
 the European Bioinformatics Institute of Bioinformathe Buropean Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement 'comor send an email to '''
 CONFLICT
SEQUENCE
 MEDLINE-21396509; PubMed-11481432;
Barnett M.J., Fisher R.F., Jones T., Komp C., Abola A.P.,
Barnoy-Hubler F., Bowser L., Capela D., Galibert F., Gouzy J.,
Barloy-Hubler F., Bowser L., Hyman R.W., Kahn D., Kahn M.L.,
Gurjal M., Hong A., Huizar L., Hyman R.W., Kahn D., Kahn M.L.,
Kalman S., Keating D.H., Palm C., Peck M.C., Surzycki R., Wells
Yeh K.-C., Davis R.W., Federspiel N.A., Long S.R.;
 NADH dehydrogenase I chain E 2 (EC 1.6.5.3) (oxidoreductase chain E 2).
 SEQUENCE
 METAL
METAL
 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Exthe European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content
 "Nucleotide sequence and predicted functions of the entire Sinorhizobium meliloti pSymA megaplasmid."; Proc. Natl. Acad. Sci. U.S.A. 98:9883-9888(2001).
 Putnoky P., Jady B., Chellapilla K.P., Barta F., Kiss E "Rhizobium meliloti carries two sets of nuo genes."; Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases
 Pfam; PF01257; complex1_24kD; 1. ProDom; PD003859; Cmplx1_24kDa; 1. PROSITE; PS01099; COMPLEX1_24K; 1.
 Plasmid pSymA (megaplasmid 1).
Bacteria; Proteobacteria; alpha subdivision; Rhizobiaceae group;
 NUOE2 OR RAO830 OR SMA1526.
Rhizobium meliloti (Sinorhizobium meliloti)
 30-MAY-2000 (Rel. 39, Creat
15-JUN-2002 (Rel. 41, Last
15-JUN-2002 (Rel. 41, Last
 METAL
 Complete proteome.
 Oxidoreductase; NAD;
 EMBL; AJ245399;
 SEQUENCE FROM N.A.
 SEQUENCE FROM N.A.
 NCBI_TaxID=382;
 Rhizobiaceae; Sinorhizobium
 NUE2_RHIME
 [nterPro;
 27
 47 NLDA
 1 NLDA 4
 CATALYTIC ACTIVITY: NADH + ubiquinone = NAD(+) + ubiquinol COFACTOR: BINDS A 2FE-2S CLUSTER (POTENTIAL).
 SIMILARITY: BELONGS TO THE COMPLEX I 24 kDa SUBUNIT FAMILY.
 AE007270;
 4
 Similarity
 07270; AAK65488.1; -.
IPR002023; Cmplx1_24kDa.
 50
 164
 96
168
 100.0%;
ilarity 100.0%;
Conservative
 ¥,
 STANDARD;
 CAB51633.1; -.
 39, Created)
 77
82
118
122
122
96
 17653
 18375
 100.0%;
 Ubiquinone;
 WW.
 W.
 sequence update)
 IRON-SULFUR (2FE-2S) (
IRON-SULFUR (2FE-2S) (
IRON-SULFUR (2FE-2S) (
IRON-SULFUR (2FE-2S) (
T -> K (IN REF. 1).
W; 165121F27B0C8948 CRC
 0,
 agreement (See http://www.isb-sib.ch/announce/
 is not removed
Score
Pred.
 Score 20; DB 1;
Pred. No. 1.6e+02;
 PRT;
 35CFB8503272E38F CRC64;
 Mismatches
 Iron-sulfur; Plasmid;
20;
No.
 168
 DB 1;
1.7e+02;
 A
 (NADH-ubiquinone
 Usage
 Length 164;
 CRC64;
 Length 168
 (POTENTIAL).
(POTENTIAL).
 Indels
 (POTENTIAL)
 by and
 restrictions
 EMBL outstation
 ST
 a collaboration
 tor
 0;
 D.
 Gaps
 commercia
 .
H.,
 on
 9
 its
 0;
```

```
Вb
 RESULT
 Matches
 STRAIN=0157:H7 / RIMD 0509952;

MEDLINE=21156231; PubMed=11258796;

Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoya Han C.-G., Ohtsubo E., Nakayama K., Murata T., Tanaka M., Tobe 1 Lida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasunaa Kuhara S., Shiba T., Hattori M., Shinagawa H.;

"Complete genome sequence of enterohemorrhagic Escherichia coli 0157:H7 and genomic comparison with a laboratory strain K-12.";
 Perna N.T., Plunkett G. III, Burland V., Mau B., Glasner J.D., Rose D.J., Mayhew G.F., Evans P.S., Gregor J., Kirkpatrick H.A., Posfai G., Hackett J., Klink S., Boutin A., Shao Y., Miller L., Grotbeck E.J., Davis N.W., Lim A., Dimalanta E.T., Potamousis K., Apodaca J., Anantharaman T.S., Lin J., Yen G., Schwartz D.C., Welch R.A., Blattner F.R.;
 STRAIN-K12 / MG1655;

MEDLINE-97426617; PubMed-9278503;

Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland N. Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F., Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J., Mau B., Shao Y.;
 the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
 P76597;
15-DEC-1998 (Rel.
 EMBL; AE000346; AAC75652.1; -. EMBL; AE005490; AAC57714.1; -. EMBL; AE0052562; BAB36889.1; -. ECOGene; EG14225; yfir.
 entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
 STRAIN-0157:H7 / EDL933 / ATCC 700927;
MEDLINE-21074935; PubMed-11206551;
 SEQUENCE FROM STRAIN=0157:H7
 "The
 SEQUENCE FROM N
 Escherichia coli, and Escherichia coli 0157:H7.
 ECOLI
SEQUENCE
 Hypothetical protein;
 DNA Res.
 SEQUENCE FROM
 Nature 409:529-533(2001).
 Science
 NCBI_TaxID=562,
 Bacteria; Proteobacteria;
 Hypothetical protein yfik precursor. YFIR OR B2603 OR Z3897 OR ECS3466.
 "Genome sequence of enterohaemorrhagic Escherichia coli O157:H7.";
 15-DEC-1998 (Rel.
16-OCT-2001 (Rel.
 YFIR_ECOLI
 137
 NLDA
 complete genome sequence nce 277:1453-1474(1997).
 NLDA 140
 4;
 8:11-22(2001)
 4
 172 AA;
 Conservative
 N.A.
 N.A.
 STANDARD;
 83334;
 37, Created)
37, Last sequence up
40, Last annotation
 18978
 Signal;
 MW;
 gamma
 0;
 HYPOTHETICAL PROTEIN YFIR
 POTENTIAL
 Complete proteome
 of.
 2E2CC812E49F3AD5
 subdivision;
 Mismatches
 Escherichia coli K-12.";
 update)
 172
 update)
 Usage
 Enterobacteriaceae;
 0,
 CRC64;
 Indels
 bу
 N., Yasunaga
 Yokoyama
Tobe T.,
 0
 or
 ۷.,
 Gaps
 ۳.
 0
```

Query Match

100.0%;

Score

20;

DB 1;

Length 172;

```
ID ACCOMENTATION ACCORDANT A
 RESULT 30
KAD1_ANASP
 밁
 δÃ
 RESULT 29
YWY1_CAEEL
 Вþ
 δÔ
 Query Match
Best Local S
Matches 4
 Best Loc
Matches
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE-21595285; PubMed-11759840;
Kaneko T., Nakamura Y., Wolk C.P., Ku
Kaneko T., Ku
K
 KAD1_ANASP
Q8YPJ8;
 Waterston
Submitted
 15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
Adenylate kinase 1 (EC 2.7.4.3) (ATP-AMP transphosphorylase 1).
 мидраела sp. (strain PCC 7120).
Bacteria; Cyanobacteria; Nostoc
NCBI_TaxID=103690;
 SEQUENCE
 CHAIN
 Hypothetical protein; SIGNAL 1 1
 WormPep;
 EMBL; U41025; AAA82349.2; -.
 entities requires a license agreement (S or send an email to license@isb-sib.ch).
 modified
 use
 the
 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
 Submitted (NOV-1995)
 STRAIN-Bristol
 Caenorhabditis elegans.
Eukaryota; Metazoa; Nemato
Rhabditidae; Peloderinae;
 01-NOV-1997 (Rel. 35, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Hypochetical protein COIC4.1 in chromosome X
 Q11088;
 YWY1
 SEQUENCE FROM N.A.
 NCBI_TaxID=6239;
 REVISIONS
 163
 147
 Local
 \vdash
 European Bioinformatics Institute.
 OR ALL4196
 NLDA 166
 NLDA 4
 NLDA
 CAEEL
 NLDA 4
 Similarity
 Similarity 100 4; Conservative
 non-profit institutions as long as its content and this statement is not removed. Usage by ar
 C01C4.1; CE29554.
 (OCT-2001) to the EMBL/GenBank/DDBJ databases
 æ
..
 150
 20
176 AA;
 Conservative
 STANDARD;
 STANDARD;
 176
 Nematoda; Chromadorea; Rhabditida; Rhabditoidea; rinae; Caenorhabditis.
 20081 MW;
 19
 100.0%;
 100.0%; +-
 ť
 Signal.
 the
 Nostocales;
 0,:
 EMBL/GenBank/DDBJ databases
 HYPOTHETICAL PROTEIN CO1C4.1.
 Score 20;
Pred. No.
 POTENTIAL.
 PRT;
 Pred. No. 1.7e+02;
; Mismatches 0;
 PRT;
 EF58809D2034267C CRC64;
 Mismatches
 A., Kawashima K., Kimura
 Matsuno
 Nostocaceae;
 184
 (See http://www.isb-sib.ch/announce/
 There are no restrictions
 1.8e+02;
 ξ
 DB 1;
 AA
 precursor
 0,
 Length 176
 Muraki
 Indels
 Indels
 and
 1S 1n
 T.
 0,
 for
 0;
 Gaps
 n no way
 Gaps
 on
 0
 0
```

```
RESULT 31
 밁
 δÃ
 Query Match
Best Local
 Matches
 Q56253;

01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
TATA-box binding protein (TATA-box | factor) (Topotein) (TBP) (Box A binding protein) (BAP).
 This
 between
 use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
 Transferase; Kinase; ATP-binding; Complete proteome NP_BIND 8 16 ATP (BY SIMILARITY).
 PRINTS; PR00094; ADENYLTKNASE.
ProDom; PD000657; Adenylate_kin; 1,
PROSITE; PS00113; ADENYLATE_KINASE;
 This SWISS-PROT entry is copyright, It is produced through a collaboratic between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no was
 SEQUENCE FROM N.A.
 NCBI_TaxID=2264;
 Phermococcus
 Archaea; Euryarchaeota;
 Thermococcus celer.
 SEQUENCE
 InterPro; IPR000850; Adenylate_kin.l
Pfam; PF00406; adenylatekinase; 1.
PRINTS: PRODOG4: ADRNYLTKNASE
 EMBL; AP003595; BAB75895.1;
 -!- SUBUNIT: Monomer (By similarity).
-!- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
-!- SIMILARITY: BELONGS TO THE ADENYLATE KINASE FAMILY.
 cyanobacterium Anabaena s
DNA Res. 8:205-213(2001).
 maintenance and cell growth.
-!- CATALYTIC ACTIVITY: ATP + AMP
 -!- FUNCTION: This small ubiquitous
 Yasuda M., Tabata S.; "Complete genomic sequence of the
 113 NLDA 116
 Nakazaki N.,
 Local Similarity les 4; Conserv
 1 NLDA 4
 THECE
 SWISS-PROT entry is copyright. It is produced through a centre the Swiss Institute of Bioinformatics and the EMBL
 184 AA;
 Conservative
 Shimpo S.,
 STANDARD;
 20442 MW;
 100.0%;
 Thermococci;
 sp. strain |PCC
 Sugimoto M., Takazawa
 0;
 Pred.
 PRT; |
 Score
 A0CEDB1170D93B69
 Mismatches
 filamentous n |PCC 7120.";
 No. 1.9e+02;
 20;
 enzyme
 189
 ADP +
 Thermococcales; Thermococcaceae;
 B
 DB 1;
 ADP.
 (TATA sequence-binding
 S
 М.
 nitrogen-fixing
 essential
 Length 184;
 CRC64;
 Indels
 BINDS SPECIFICALLY
 Yamada
 TO THE POSITION
 Ξ
 a collaboration
MBL outstation -
 a collaboration
 0,
 Gaps
 OF
 ţ
 its
 0;
```

use by modified

the European Bioinformatics Institute.

non-profit institutions as

not

removed. long

Usage its content

Ьy

and

for

commercial

9

as

There are no restrictions

```
RESULT 32
TBP_PYRKO
 Query Match
Best Local Similarity
Matches 4; Conser
 Query Match
Best Local Similarity
Matches 4; Conserv
 TBP_PYRKO
Q52366;
 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
 01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
16-OCT-2001 (Rel. 40, Last anotation update)
TATA-box binding protein (TATA-box factor) (T
 PRINTS; PR00686; TIFACTORIID.
PROSITE; PS00351; TFIID; 2.
Transcription regulation; DNA-binding; Repeat.
 EMBL; D50018; BAA08743.1; -. HSSP; Q57050; 1PCZ.
 protein) (TBP) (Box A binding protein) (BAP).
 Pfam; PF00352; TBP; 2.
PRINTS; PR00686; TIFACTORILD.
PROSITE; PS00351; TFILD; 2.
 entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
 InterPro; IPR000814; TFIID.
Pfam; PF00352; TBP; 2.
 Rashid N., Morikawa
 SEQUENCE FROM N.A.
 Pyrococcus kodakaraensis.
Pyrohada: Furvarchaeota; Thermococci; Thermococcales; Thermococcaceae;
 EMBL; U04932; AAA73412.1; -. HSSP; Q57050; 1PCZ.
 SEQUENCE
 MEDLINE=96105215; PubMed=8529878;
 SEQUENCE
 Transcription regulation; DNA-binding; Repeat.
 Àn
 REPEAT
 InterPro; IPR000814; TFIID.
 113 NLDA 116
 1 NLDA 4
 e 166:139-143(1995).

FUNCTION: GENERAL FACTOR THAT PLAYS A ROLE IN THE ACTIVATION OF ARCHAEAL GENES TRANSCRIBED BY RNA POLYMERASE. BINDS SPECIFICALLY TO THE TATA BOX PROMOTER ELEMENT WHICH LIES CLOSE TO THE POSITIO
 hid N., Morikawa M., Imanaka T.; abnormally acidic TATA-binding protein from a hyperthermophilic
 OF TRANSCRIPTION INITIATION. SIMILARITY: BELONGS TO THE TBP FAMILY.
 189 AA;
 102
190 AA;
 100.0%; ilarity 100.0%; Conservative 0
 Conservative
 99
 STANDARD;
 175
21348 MW;
 178
21494 MW;
 100.0%;
 0;
 0;
 Score 20;
Pred. No.
 Score 20;
Pred. No.
 503115E5B077077D CRC64;
 1FE1509E645E7980 CRC64;
 Mismatches
 Mismatches
 190
 ; DB 1; I
. 1.9e+02;
 DB 1; 1
. 1.9e+02;
 (TATA sequence-binding
 Length 190;
 Length 189;
 Indels
 Indels
0;
 0;
 POSITION
Gaps
 Gaps
 0;
0;
```

Q

밁

SO FIT WE DE COC

```
AC ID
 RESULT 34
TXLA_SYNP7
 밁
 STITITE AND DESCRIPTION OF THE STREET OF THE
 Ş
 Q
 밁
 SPOA_BACPU
 RESULT 33
 Matches
 Query Match
Best Local
 DNA_BIND
NON_TER
SEQUENCE
TXLA_SYNP7 P35088;
 NON_TER
 ProDom; PD000039; Response_reg; 1.
PROSITE; PS50110; RESPONSE_REGULATORY; 1.
Sporulation; DNA-binding; Transcription regulation;
 EMBL; U09975; AAA18876.1; -. HSSP; P52934; 1QMP.
 entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
 -!- SUBCELUTAR LOCATION: CYLOPAGE (BY SIMILARITY).
-!- PHOSPHORYLATED BY KINA AND KINB (BY SIMILARITY).
-!- SIMILARITY: CONTAINS 1 RESPONSE REGULATORY DOMAIN.
 Clostridium species identifies a probable DNA-binding domain.";
MOL. Microbiol. 14:411-426(1994).
-i- EUNCTION: MAY PLAY THE CENTRAL REGULATORY ROLE IN SPORULATION.
MAY BE AN ELEMENT OF THE EFFECTOR PATHWAY RESPONSIBLE FOR THE
 Bacillus pumilus (Bacillus mesentericus).
Bacteria; Firmicutes; Bacillales; Bacillaceae;
 01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat
Stage 0 sporulation protein A (Fragment).
 modified and this statement is not removed.
 Brown D.P.,
 MEDLINE=95191392; PubMed=7885226;
 SPOOP
 SPOA_BACPU
 Pfam; PF00072; response_reg; 1.
 InterPro;
 Youngman P.
 SEQUENCE FROM
 NCBI_TaxID=1408;
 01-OCT-1996
 Repressor;
 P52933;
 Characterization of spoOA homologues in diverse Bacillus
 116 NLDA 119
 68
 μ
 1 NLDA 4
 ACTIVATION OF SPORULATION GENES IN RESPONSE TO NUTRITIONAL STRESS, SPOOD MAY ACT IN CONCERT WITH SPOOH (A SIGMA FACTOR) TO CONTROL THE EXPRESSION OF SOME GENES THAT ARE CRITICAL TO THE SPORULATION PROCESS. REPRESSOR OF ABRB, ACTIVATOR OF THE SPOIL OPERON. BINDS THE DNA SEQUENCE 5'-TGNCGAA-3' (OA BOX) (BY SIMILARITY). SUBCELLULAR LOCATION: CYtoplasmic (Probable).
 NLDA
 NLDA
 Similarity
 92
 IPR001789; Response_reg.
 PhosphoryLation;
 136
191
191 AA;
 Ganova-Raeva L.,
 100.0%;
ilarity 100.0%;
Conservative (
 STANDARD;
 STANDARD;
 60
155
191
21288
 MW:
 0;
 Sensory transduction
 H-T-H MOTIF
 RESPONSE REGULATORY
 Green
 Score 20; DB 1;
Pred. No. 1.9e+02;
Mismatches 0;
 PRT;
 D211F2C695F56B44 CRC64;
 B.D., Wilkinson S.R., Young
 191
 191
 update)
 (POTENTIAL).
 A
 Ā
 Usage
 Bacillus
 Length 191;
 ρy
 Activator;
 and
 0
 roi
 Gaps
 H
```

```
밁
 γ
 SOFT WERE RESERVED TO COLOR COLOR COLOR RESERVED TO THE SOFT OF TH
 RESULT 35
 IND1_HUMAN
 Query Match
Best Local
 Matches
 between
the Euro
 Pfam; PF PROSITE;
 This
 IND1_HUMAN
P37290;
 the
 This
 01-FEB-1994 (Rel. 28, Create 01-FEB-1994 (Rel. 28, Last s 01-NOV-1995 (Rel. 32, Last a Thiol:disulfide interchange
 MEDLINE=94193794; PubMed=7511610; Whaley A.E., Meka C.S.R., Reddy C
 TISSUE=Placenta;
MEDLINE=94193794;
 SEQUENCE FROM N.A.
 NCBI_TaxID=9606;
 Eukaryota; Metazoa;
Mammalia; Eutheria;
 Homo sapiens (Human)
 01-OCT-1994 (Rel. 30, Created)
01-OCT-1994 (Rel. 30, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Interferon delta-1 precursor.
 Redox-active center; Transmembrane.
TRANSMEM 14 30 POTENT
DISULFID 69 72 REDOX-
SEQUENCE 191 AA; 20661 MW; 8C88
 EMBL; U05044;
HSSP; P20857;
 modified and this statement is not removed, entities requires a license agreement (See or send an email to license@isb-sib.ch).
 use
 Submitted (JAN-1994) to the
 SEQUENCE FROM N.A.
Collier J.L., Grossman A.R.;
 Bacteria; Cyanobacteria;
 Synechococcus sp.
 "Identification and cellular localization
 InterPro;
 between
 Imakawa K.;
 142 NLDA 145
 Biol.
 1 NLDA 4
 s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the Ew European Bioinformatics Institute. There are no restruct by non-profit institutions as long as its content
 REDUCED IN THE PROCESS.
SIMILARITY: BELONGS TO THE THIOREDOXIN FAMILY.
 European
 SIMILARITY: BELONGS TO THE INTERFERON ALPHA,
 SUBCELLULAR LOCATION: Secreted
 nitted (JAN-1994) to the EMBL/GenBank/DDBJ databases.
FUNCTION: REQUIRED FOR DISULFIDE BOND FORMATION IN SOME PROTEINS ACTS BY TRANSFERRING ITS DISULFIDE BOND TO OTHER PROTEINS AND IS
 SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
 human placenta
 PF00085; thiored; 1. TE; PS00194; THIOREDOXIN; 1.
 h 100.0%;
Similarity 100.0%;
4; Conservative
 the Swiss Institute of Bioinfoean Bioinformatics Institute.
 Chem. 269:10864-10868(1994).
 IPR000063; Thiored.
 AAA89104.1; -.
 STANDARD;
 (strain PCC 7942) (Anacystis nidulans R2).
 28, Created)
28, Last sequence update)
32, Last annotation updat
 Primates;
 Chordata;
 .0%;
 0;
 protein
 REDOX-ACTIVE (POTENTIAL).
8C88B397AD40F640 CRC64;
 POTENTIAL.
 Score
Pred.
 Catarrhini; Hominidae; Homo
 Craniata; Vertebrata; Euteleostomi;
 PRT;
 C.S., Harbison L.A.,
 red. No. 1.9e+02;
Mismatches 0;
 as
 20;
 on update) txlA.
long
 195
 (See http://www.isb-sib.ch/announce/
 There
 A
 DB 1;
 of.
 unique
 Usage
 its
 are
 Length 191;
 BETA
 no
 content
 Уď
 interferon mRNA
 Hunt J.S.
 restrictions
 AND DELTA
 restrictions
 and
 EMBL
 a collaboration -
 for
 0,
 outstation
 'n
 in no way commercial
 Gaps
 on
no
its
way
 0
```

```
DЪ
 Ωy
 SOUTH TO SOUTH THE SOUTH T
 RESULT 36
YDB6_YEAST
 밁
 Qy
 Best Loc
Matches
 Query Match
 Query Match
Best Local
 Matches
 YDB6_YEAST
Q12055;
30-MAY-2000
30-MAY-2000
 SMART: SMO076; IFabd; 1.

PROSITE; PS00252; INTERFERON_A_B_D; 1.

Cytokine; Glycoprotein; Antiviral; Multigene family; Cytokine; Glycoprotein; Antiviral; Multigene family; SIGNAL 1 23 INTERFERON DELTA-1.

CHAIN 24 195 INTERFERON DELTA-1.

DISULFID 24 12 BY SIMILARITY.

DISULFID 52 162 BY SIMILARITY.

DISULFID 52 162 BY SIMILARITY.
 between the Swiss Institute of Bioinformatics and the the European Bioinformatics Institute. There are no reuse by non-profit institutions as long as its contenuation modified and this statement is not removed. Usage by
 Pohl T.M.;
Submitted (NOV-1995) to the EMBL/GenBank/DDBJ databases
-:- SIMILARITY: BELONGS TO THE UPF0101 FAMILY.
 modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
 Hypothetical protein;
NP_BIND 14 2:
SEQUENCE 197 AA; 2:
 SGD; S0002325; YDL166C.
Hypothetical protein; ATP-binding.
 EMBL; Z67750; CAA91580.1; -. EMBL; Z74214; CAA98740.1; -.
 16-OCT-2001
Hypothetical
 EMBL; L25664; AAA36123.1; -. PIR; A53746; A53746. HSSP; P01563; 2HIE.
 entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
 This SWISS-PROT entry is copyright! It is produced through a collaboration
 STRAIN=S288c;
 SEQUENCE FROM
 NCBI_TaxID=4932;
 Saccharomycetales;
 Eukaryota;
 Saccharomyces cerevisiae (Baker's
 YDL166C.
 ProDom; PD000550; Interferon_abd;
 PRINTS;
 riam;
 InterPro; IPR000471; Interferon_abd.
 118 NLDA 121
124 NLDA 127
 Local
 Н
 1 NLDA 4
 NLDA 4
 PF00143; interferon; 1.
S; PR00266; INTERFERONAB.
 4;
 Similarity
 Similarity
 Fungi;
 (Rel.
1 22.7
 (Rel.
 Conservative
 Conservative
 N.A.
 STANDARD;
 Ascomycota;
 39, Created)
39, Last sequence update)
40, Last annotation update)
kDa protein in CDC36-NRP1 intergenic region
 Saccharomycetaceae;
 21 A
22723 MW;
 100
 100.0%;
 100.0%;
 0
 ATP
 0;
 Score 20;
Pred. No.
 Score 20;
Pred. No.
 Saccharomycotina; Saccharomycetes,
 836A25B0D7E2633C CRC64;
 EE1CF9E29E2E9165 CRC64;
 Mismatches
 Mismatches
 (POTENTIAL)
 yeast).
 197
 Saccharomyces.
 There are no restrictions
 2e+02;
 2e+02;
 AA
 DB
 DB 1;
 as its content
 μ,
 0,
 0
 Length 195;
 Length 197;
 and
 EMBL outstation
 0
 for
 0;
 'n
 Gaps
 Gaps
 g
 no
 its
 0
 0;
```

```
GDIR_YEARY
GDIR_YEARY
ID GDIRAY
AC Q1243a
AC Q1243a
DT Q1-NOV
DT Q1-NOV
DT 15-JUN
DE Rho GI
GN RD11 C
OS Saccha
OC Eukary
OC Saccha
OC Saccha
OC NCBI_T
ON NCBI_T
RN HEDLIN
RN HEDLIN
RN HEDLIN
RN HEDLIN
RN HEDLIN
RN WOElf[]
RP SEQUEN
RX WOElf[]
RT 'Anal)
RT 'Anal)
RT 'Anal)
RT 'Chrome
RT 'Chrome
RT 'Chrome
CC This S
CC -!- SI
COAE_XYLFA
ID COAE_X
AC Q9PAI2
DT 16-OCT
DT 16-OCT
DT 16-OCT
DE Dephos
GN COAE O
OS XY1ell
OC Xylell
 RESULT
 밁
 Query Match
Best Local S
Matches 4
 Q12434;
01-NOV-1997
 use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See
 This SWISS-PROT entry is copyright. It is produced through a collab
between the Swiss Institute of Bioinformatics and the EMBL outst
the European Bioinformatics Institute. There are no restrictions
use by non-profit institutions as long as its content is in
 Yeast 12:1549-1554(1996).

-i- FUNCTION: REGULATES THE GDP/GTP EXCHANGE PROTEINS BY INHIBITING THE DISSOCIATION CONTROL OF THE PROPERTY OF T
 WCDLINE=97127826; PubMed=8972577; WCOELFL S., Haneman V., Saluz H.P.; WCOELFL S., Haneman V., Saluz H.P.; WCOELFL S., The segment from the left arm chromosome IV.";
 01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Rho GDP-dissociation inhibitor (Rho GDI).
RDI1 OR YDL135C OR D2175.
 COAE OR XF2536.
Xylella fastidiosa
 Q9PAI2;
16-OCT-2001
 SEQUENCE FROM N.A.

MEDLINE-94327511; PubMed-8051050;

MEDLINE-94327511; PubMed-8051050;

MASUGA T., Tanaka K., Nonaka H., Yamochi W., Maeda A., Takai Y.;

"Molecular cloning and characterization of yeast rho GDP dissociation

"Nolecular"
 GDIR_YEAST
 Dephospho-CoA
 16-OCT-2001
16-OCT-2001
 COAE_XYLFA
 InterPro; IPR000406; Rho_GDI
Pfam; PF02115; Rho_GDI; 1.
 Saccharomyces cerevisiae (Baker's yeast).

Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
 xylella
 Bacteria;
 SEQUENCE FROM N.A.
 inhibitor
 33
 1 NLDA 4
 L; X96876; CAA65624.1;
Z74183; CAA98708.1;
P; P52566; 1DS6.
S0002294; RDI1.
 SUBSEQUENT BINDING OF GTP TO THEM.
SUBCELLULAR LOCATION: Cytoplasmic.
SIMILARITY: BELONGS TO THE RHO GDI FAMILY.
 D31630; BAA06499.1; -. X96876; CAA65624.1; -. CAA98708.1; -.
 activation
 an email to license@isb-sib.ch).
 Similarity
 Proteobacteria;
 (Rel. 40, Created)
(Rel. 40, Last sequence update)
(Rel. 40, Last annotation update)
oA kinase (EC 2.7.1.24) (Dephosphocoenzyme
 AA;
 269:19713-19718(1994).
 FY1679;
 STANDARD;
 STANDARD;
 35, Created)
 Saccharomycetaceae;
 23138 MW;
 100.0%;
 gamma
 0
 Score 20; DB 1; Length 202; Pred. No. 2e+02; Mismatches 0; Indels
 PRT;
 300FF974383B496F CRC64;
 subdivision; Xanthomonas group
 207
 202
 Saccharomyces
 A
 E REACTION OF THE OF GDP FROM THEM,
 of yeast
 A kinase).
 0;
 RHO
 collaboration
 AND
 outstation
 Gaps
 THE
 ņ
 9
 0
```

```
RESULT 39
VS10_ROTBS
 PA E
 B
 Ş
 RA Facincani A.P., Ferreira A.J.S., Ferreira V.C.A., Ferro J.A.,

RA Faraga J.S., Franca S.C., Franco M.C., Frohme M., Furlan L.R.,

RA Garnier M., Goldman G.H., Goldman M.H.S., Gomes S.L., Gruber A.,

RA Garnier M., Goldman G.H., Goldman M.H.S., Gomes S.L., Gruber A.,

RA Garnier M., Goldman G.H., Goldman M.H.S., Gomes S.L., Gruber A.,

RA Lemos E.G., Kuramae E.E., Laigret F., Lambais M.R., Leite L.C.C.,

RA Lemos E.G., M., Lemos M.Y.F., Lopes S.A., Lopes C.R., Machado J.A.,

RA Machado M.A., Madeira A.M.B.N., Madeira H.M.F., Marino C.L.,

RA Machado M.A., Maracca E.C., Miyaki C.Y., Monteiro Vitorello C.B.,

RA Marques M.V., Martins E.A.L., Martins E.M.F., Marino C.L.,

RA Menck C.F.M., Miracca E.C., Miyaki C.Y., Monteiro Vitorello C.B.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,

RA Moon D.H., Nagai M.A., Nascimento A.L.T., Salvai M.A.,

de Rosa V.E. Jr., & Santelli R.V., Savasaki H.E.,

de Rosa V.E. Jr., & Salvestri M.E., Salvai M.J., de Souza A.A.,

de Souza A.P., Terenzi M.F., Truffi D., Tsai S.M., Tsuhako M.H.,

RA de Silva A.C., R., de Silva A.M., de Silva F.R., Silva W.A.J.,

RA de Silva A.C., Natishi M.F., Truffi D., Tsai S.M., Tsuhako M.H.,

RA de Silva A.C., Veriovski Almeida S., Vettore A.L.,

RA Maria M., Veriovski A.H., Weriovski Almeida S., Vettore
 Query Match
Best Local
 Matches
VS10_ROTBS STANDARD;
P34718;
01-FEB-1994 (Rel. 28, Created)
 EMBL; AE004060; AAF85333.1; ALT_INIT. InterPro; IPR001977; Depp_CoAkinase. Pfam; PF01121; CoaE; 1.
 Complete proteome.
NP_BIND 10
SEQUENCE 207 AA;
 ProDom; PD003329; Depp_CoAkinase;
TIGRFAMs; TIGR00152; UPF0038; 1.
PROSITE; PS01294; COAE; 1.
 the European Bioinformatics Institute. The use by non-profit institutions as moved modified and this statement is not removed entities requires a license agreement (See
 Bueno M.R.P., Camargo A.A., Camargo L.E.A., Carraro D.M., Carrer H., Colauto N.B., Colombo C., Costa F.F., Costa M.C.R., Costa-Neto C.M., Coutinho L.L., Cristofani M., Dias-Neto E., Docena C., El-Dorry H.,
 Simpson A.J.G., Reinach F.C., Arruda P., Abreu F.A., Acencio M., Alvarenga R., Alves L.M.C., Araya J.E., Baia G.S., Baptista C.S., Barros M.H., Bonaccorsi E.D., Bordin S., Bove J.M., Briones M.R.S.,
 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation.
 MEDLINE=20365717; PubMed=10910347;
 NCBI_TaxID=2371;
[1]
 Transferase; Kinase;
 or send an email to license@isb-sib.ch).

 -I- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
 -I- SIMILARITY: BELONGS TO THE COAE FAMILY.

 SEQUENCE FROM N.A.
 191 NLDA 194
 1 NLDA 4
 Similarity
 Conservative
 17
22224
 100.0%;
 ATP-binding; Coenzyme A biosynthesis;
 WW;
 0;
 ATP (POTENTIAL).; FB6234199F314CD8
 Score 20; DB Pred. No. 2.1); Mismatches
 209
 moved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
 There are no restrictions ng as its content is in
 2.1e+02;
 Length 207;
 CRC64;
 Indels
 0;
 Gaps
 ö
 its
 0
```

```
RESULT 40
SPOA_BACCI
 밁
 Š
 Best Loc
Matches
 Query Match
 Clostridium species identifies a probable DNA-binding domain.";

Wol. Microbiol. 14:411-426(1994).

Wol. Microbiol. 15:411-426(1994).

Wol. Microbiol. 17:411-426(1994).

Wol. May Pay Hay Play He EFFECTOR PATHWAY RESPONSIBLE FOR THE ACTIVATION OF SUPPORTUATION RESPONSE THAT ARE CRITICAL TO THE SPORTUATION PROCESS. REPRESSION OF SOME GENES THAT ARE CRITICAL TO THE SPORTUATION PROCESS. REPRESSOR OF ABRB, ACTIVATOR OF THE SPOITA OPERON. BINDS THE DNA SEQUENCE 5'. TRUCGAA-3' (0A BOX) (BY SIMILARITY).

-I- SUBCELLULAR LOCATION: CYCOPLASMIC (Probable).

-I- SUBCELLULAR LOCATION: CYCOPLASMIC (Probable).

-I- SIMILARITY: CONTAINS 1 RESPONSE REGULATORY DOMAIN.
 SP0A_BACCI STANDARD; PRT; 2
P52931;
01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
 SEQUENCE FROM N.A.
MEDLINE=93275758; Put
Jiang B., Tsunemitsu
 BACCI
 This
 This
 Brown D.P., Ganova-Raeva
 SEQUENCE FROM N.A.
STRAIN-ATCC 4513;
MEDLINE=95191392; PubMed=7885226;
 Bacillus circulans.
Bacteria; Firmicutes;
 Stage 0 sporulation
 SEQUENCE
 InterPro; IPRO
Pfam; PF01525;
 EMBL; L12391; -; NOT_ANNOTATED_CDS. InterPro; IPR002512; Rota_NS26.
 entities requires a license agreement (S or send an email to license@isb-sib.ch).
 use by non-profit institutions as long a modified and this statement is not removed.
 the
 between
 Nucleic Acids Res. 21:2250-2250(1993)
 rotavirus
 Viruses; dsRNA vi
NCBI_TaxID-33723;
 Bovine rotavirus (group Viruses; dsRNA viruses;
 Minor outer
 01-FEB-1994
01-FEB-1994
 Youngman P
 NCBI_TaxID=1397;
 "Characterization of spoOA homologues in
 "Nucleotide sequences
 Local Similarity
 7
 \vdash
 s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
 European
 NLDA
 NLDA 4
 protein
 SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation -
 10
 209
 (Rel.
 Conservative
 capsid
 Bioinformatics
 AA;
 Rota_NS26;
 PubMed=8389040;
tsu H., Gentsch J.R
ences of genes 6 and
 28, Last
28, Last
 protein
 protein A (Fragment).
 23438 MW;
 100.0%;
 Bacillales;
 C / strain Shintoku).
Reoviridae; Rotavirus
 ۲.,
 annotation update)
 sequence update)
 (NS26).
 0;
 Institute.
 Green B.D., Wilkinson S.R., Young
 Score 20;
Pred. No.
 820AC9B3C9DA1956 CRC64;
 Mismatches
 Bacillaceae;
 update)
 10
 210 AA
 update)
 (See http://www.isb-sib.ch/announce/
 Saif L.J., Glass R.I.; of a bovine group C
 2.1e+02;
There
 diverse
 DB 1;
 as its content
 Usage
 are
 Bacillus
 Length 209
 Bacillus and
 no
 by and
 restrictions
 is
 0;
 for
 H
 X
 commercial
 Gaps
 on
 no
 way
 0;
```

```
SO THE TEXT OF THE
 RESULT 41
VS10_ROTPC
ID VS10_ROTPC
 밁
 δÃ
밁
 δÃ
 Query Match
Best Local S
Matches 4
 Matches
 Query Match
Best Local
 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no was modified and this statement is not removed. Usage by and for commercia
 MOD_RES
 use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
 Coat protein. SEQUENCE 210
 Pfam; PF01525; Rota_NS26; Coat protein.
 SEQUENCE FROM N.A.

MEDLINE-93277387; PubMed-8389118; |
Bremont M., Chabanne-Vautherot D., Cohen J.;

"Sequence analysis of three non structural proteins
 01-JUN-1994
01-JUN-1994
 EMBL; U09973; AAA18874.1; HSSP; P52934; 1QMP.
 PIR; B48357; B48357.
PIR; S25544; S25544.
InterPro; IPR002512;
 group
 Minor outer
 01-JUN-1994
 SEQUENCE
 PROSITE; PS50110; RESPONSI Sporulation; DNA-binding;
 Pfam; PF00072; response_reg;
ProDom; PD000039; Response_re
 EMBL; X65938; CAA46741.1; -.
 or send
 entities requires a
 Arch. Virol. 130:85-92(1993).
 NCBI_TaxID=10916;
 Porcine rotavirus
 P36358;
 DNA_BIND
 DOMAIN
 SMART; SM00448; REC;
 InterPro;
 145 NLDA 148
 1 NLDA 4
 \vdash
 NLDA 10
 NLDA 4
 Similarity
4; Conser
 s requires a license agreement (S an email to license@isb-sib.ch).
 4;
 Similarity
 (Cowden strain) rotavirus.";
 dsRNA viruses;
 IPR001789; Response_reg.
 210
210 AA;
 Phosphorylation; Sensory transduction
1 122 RESPONSE REGULATORY
 192
 (Rel.
 capsid
 (Rel.
 Conservative
 AA;
 STANDARD;
 . 29, Created)
. 29, Last sequ
. 29, Last anno
 >210
56
 RESPONSE_REGULATORY; 1. binding; Transcription regulation;
 (group
 Response_reg; 1.
 210
23688 MW;
 protein
 23393 MW;
 100.0%;
 100.0%;
 Rota_NS26.
 Reoviridae;
 a
 1.
 sequence up
annotation
 (NS26).
 0;
 0;
 Score 20;
Pred. No.
 strain
 H-T-H MOTIF (POTENTIAL)
PHOSPHORYLATION (BY SIM
 D75EF1CE5FB32456 CRC64;
 PRT;
 Pred
 Score
 4A3CD910803B0943 CRC64;
 Mismatches
 Mismatches
 No.
 Rotavirus.
 Cowden)
 update)
 20;
 210 AA
 moved. Usage by and fo
 (See
 update)
 2.1e+02
 DB 1;
 DB 1;
 .1e+02;
 as its content
 http://www.isb-sib.ch/announce/
 0,
 Length 210;
 Length 210
 SIMILARITY)
 Indels
 of a porcine
 Activator;
 0;
 0;
 collaboration -
L outstation -
 .ch/announce/
 in
 Gaps
 Gaps
 commercial
 no
 way
 0;
 0,
```

```
SOBE_AD

SODE_AD

OPPOLIA

ID SODE AD

COPPOLIA

AC QPPOLIA

AC QPPOLIA

AC QPPOLIA

AC QPPOLIA

DIT 15-JUN

DIT 15-JUN

DIT 15-JUN

CO Archae

OC Archae

OC Archae

OC Archae

OC Archae

OC Archae

CC CA CAI

The SEQUEN

RM MEDLIN

CC -!- CO

 8
 RESULT
 Query Match
Best Local S
Matches 4
 Pfam; PF02///; SCULISMUTASE; L.
ProDom; PD000475; SODISMUTASE; NEG.
PROSITE; PS00088; SOD_MN; FALSE_NEG.
Oxidoreductase; Iron.
METAL 34 34 IRON (BY
METAL 82 82 IRON (BY
METAL 171 171 IRON (BY
METAL 171 175 IRON (BY
METAL 175 175 IRON (BY
METAL 175 175 IRON (BY
 _CERTO
 P46650;
01-NOV-1995
01-NOV-1995
15-JUN-2002
 entities
or send a
 16-OCT-2001
16-OCT-2001
15-JUN-2002
 -i- FUNCTION: Destroys radicals which are normally produced within to cells and which are toxic to biological systems (By similarity).
-i- CATALYTIC ACTIVITY: 2 superoxide + 2 H(+) = O(2) + H(2)O(2).
-i- COFACTOR: Iron (By similarity).
-i- SIMILARITY: BELONGS TO THE IRON/MANGANESE SUPEROXIDE DISMUTASE
 Cercocebus torquatus atys (Red-crowned mangabey) (Sooty mangabey) Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Enthe European Bioinformatics Institute. There are no restuuse by non-profit institutions as long as its content
 Kardinahl S., Anemuller S., Schaefer G.; "The hyper-thermostable Fe-superoxide dismutase from the Archae Acidianus ambivalens: characterization, recombinant expression,
 01-NOV-1995 (Rel. 32, Cr
01-NOV-1995 (Rel. 32, La
15-JUN-2002 (Rel. 41, La
Interleukin-6 precursor
 use by non-profit institutions as long modified and this statement is not removed
 crystallization and effects of metal exchange."; Biol. Chem. 381:1089-1101(2000).
 SEQUENCE FROM N.A.
MEDLINE=21026956; PubMed=11154067;
 Q9P9L3;
 NCBI_TaxID=2283;
 Archaea; Crenarchaeota;
 Acidianus ambivalens
 Superoxide
 InterPro;
 18
 idianus.
 1 NLDA 4
 CERTO
 FAMILY
 NLDA
 ACIAM
 pr00081; sodfe; 1.
pr02777; sodfe_C; 1.
m; PD000475; SODismutase;
 P80857;
 AF236110;
 Similarity 4; Conserv
 s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
 21
 01 (Rel. 40,
01 (Rel. 40,
02 (Rel. 41,
e dismutase
 IPR001189; SODismutase.
 100.0%; ilarity 100.0%; Conservative
 1888
 STANDARD;
 STANDARD;
 AAF36989.1; -.
 . 32, Created)
. 32, Last sequence upo
. 41, Last annotation u
 40, Last
41, Last
case [Fe] (
 (Desulfurolobus ambivalens).
ta; Thermoprotei; Sulfolobales;
 Created)
 t sequence update)
t annotation update)
(EC 1.15.1.1).
 IRON (BY SIMILARITY).
IRON (BY SIMILARITY).
IRON (BY SIMILARITY).
IRON (BY SIMILARITY).
IRON (BY SIMILARITY).
 0;
 is not removed.
 Score 20; DB 1;
Pred. No. 2.1e+02;
Mismatches 0;
 PRT;
 update)
 211
 212
 update)
 Ą
 ĀĀ
 Usage
 CRC64;
 Length 211;
 ρy
 Sulfolobaceae
 restrictions
 and
 EMBL
 Archaeon
 żs
 a collaboration
 for
 0;
 outstation
 in
 Gaps
 the
 g
 0
```

```
RESULT 44
IL6_HUMAN
 В
 5
 Best Loc
Matches
 Query Match
 DISULFID
DISULFID
CARBOHYD
CARBOHYD
 13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Interleukin-6 precursor (IL-6) (B-cell stimulatory
(Interferon beta-2) (Hybridoma growth factor).
 IL6_HUMAN P05231;
 Cytokine;
SIGNAL
 the European Bioinformatics Institute. There are no rest use by non-profit institutions as content modified and this statement is not removed. Usage by an entitles requires a license agreement (See http://www.lsborsend an email to license@isb-sib.ch).
 Hirano T., Yasukawa K., Harada H., Taga T., Watanabe Y., Matsuda 'Kashiwamura S.-I., Nakajima K., Koyama K., Iwamatsu A., Tsunasawa Sakiyama F., Matsui H., Takahara Y., Taniguchi T., Kishimoto T.;
 InterPro; IPR003573; IL6_MG
InterPro; IPR003574; Interl
Pfam; PF00489; IL6; 1
PRINTS; PR00433; IL6GCSFMGF
ProDom; PD004356; Interleuk
 This
 Eukaryota; Metazoa;
Mammalia; Eutheria;
 PROSITE; PS00254; INTERLEUKIN_6; 1.
 EMBL; L26032; AAA99972.1; HSSP; P05231; IALU.

 J. Immunol.

 nonhuman
 Villinger F.J.,
 MEDLINE=96003435;
 NCBI_TaxID=9531;
[1]
 SEQUENCE FROM N.A., AND PARTIAL S
MEDLINE=87065033; PubMed=3491322;
 Homo sapiens (Human)
 SEQUENCE
 CHAIN
 SMART; SM00126;
 "Comparative sequence analysis of cytokine
 STRAIN-FUJ
 IL6 OR IFNB2.
 160 NLDA 163
 Local
 1 NLDA 4
 FUNCTION: IL6 IS A CYTOKINE WITH A WIDE VARIETY OF BIOLOGICAL FUNCTIONS: IT PLAYS AN ESSENTIAL ROLE IN THE FINAL DIFFERENTIATION OF B-CELLS INTO IG-SECRETING CELLS, IT INDUCES MYELOMA AND PLASMACYTOMA GROWTH, IT INDUCES NERVE CELLS DIFFERENTIATION, IN HEPATOCYTES IT INDUCES ACCTE PHASE REACTANTS (BY SIMILARITY). SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE IL-6 SUPERFAMILY.
 SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EN
 Similarity
 primates."
 FROM N.A.
 212
 155:3946-3954(1995).
 Conservative
 AA;
 STANDARD;
 6; Interleukin_6; IL6; 1.
 Brar
 rubMed=7561102;
rar S.S., Mayne A.E.,
 Chordata;
Primates;
 23668 MW;
 100.0%;
 IL6_MGF_GCSF.
Interleukin_6.
 Growth factor; Sig
 0;
 POTENTIAL.

"LINKED (GLCNAC. . .) (POTENTIAL)

N-LINKED (GLCNAC. . .) (POTENTIAL)

C73C035226B44B9F CRC64;
 Score 20;
Pred. No.
 POTENTIAL.
 Craniata; Vo
Catarrhini;
 INTERLEUKIN-6.
 Mismatches
 SEQUENCE.
 212
 moved. Usage by and fo (See http://www.isb-sib.
 Chikkala N.,
 Signal.
 Vertebrata;
i; Hominidae;
 2.1e+02;
 B
 DB 1;
 genes
 Length 212;
(BSF-2)
 from
 Indels
 factor
 Ansari A.A.;
om human and
 Euteleostomi;
; Homo.
 restrictions
 2) (BSF-2)
 D
 for
 0
 collaboration
 outstation
 Gaps
 ņ
 0
```

Strausberg

```
Nickerson
Submitted
 SEQUENCE FROM N.A.
MEDLINE=88088768; PubMed=3320204;
Brakenhoff J.P.J., de Groot E.R.,
 SEQUENCE FROM N.A. MEDLINE=89193317;
 TISSUE=Fibroblast;
MEDLINE=87004683; PubMed=3758081;
 Tonouchi N., Miwa K., Karasuyama H., Matsui F "Deletion of 3' untranslated region of human "Deletion of the mRNA and high-level expr
 [6]
 SEQUENCE FROM N.A.
MEDLINE=87053818; PubMed=3023045;
MIDDErstein A., Ruggieri R., Korn J.H
Zilberstein A., Ruggieri of cDNA and
 MEDLINE=87067433; PubMed=3538015;
May L.T., Helfgott D.C., Sehgal P.B.;
"Anti-beta-interferon antibodies inhibit the increased expressi
"LA-B7 mRNA in tumor necrosis factor-treated human fibroblasts:
structural studies of the beta 2 interferon involved.";
proc. Natl. Acad. Sci. U.S.A. 83:8957-8961(1986).
 SEQUENCE FROM N.A. MEDLINE=87067433;
 "Structure and expression (BSF-2/IL-6) gene."; EMBO J. 6:2939-2945(1987).
SEQUENCE FROM
 Chung-Hua
 MEDLINE=93178270;
 protein
 Haegeman
 SEQUENCE
 Escherichia
 Aarden L.A.;
 Nakai S., Kishimoto
 Yasukawa K., Hirano
 MEDLINE=88082664; PubMed=3500852
 Nature
 Rieder
 MEDLINE-89391958;
 interferon-beta-2,
 "Stabl
 "Interleukin
 "Structural
 Molecular cloning
 lymphocytes to produce sture 324:73-76(1986).
 G.,
 0
 4
 e and
 М.J.,
 5:2529-2537(1986).
 in human
 G.,
 FROM
 89193317; PubMed=3266463; Witek-Giannotti J., Hewiukin 6: identification as
 FROM
 FROM
 Biophys.
 cells
Chung
 U
 (JUN-2001)
 efficient expression of human inte
ells after gene transfer.";
hung Liu Tsa Chih 14:340-344(1992).
 .
A. ;
 analysis of the s
human fibroblasts.
 coli.";
139:4116-4121(1987).
 Content
 Carrington
 N.A.
 z
 z
 N.A.,
 Mitt.
 z
 P
 159:625-632(1986).
 Res.
 PubMed=2789513;
 Ωı
 PubMed=1291290
 and
 AND
 83:40-47(1988)
 of the sequence
 ٦
;
 distinct
 ţ
 Commun.
 expression
 VARIANTS
D.P., Chu
 Watanabe
 the
 Volckaert
 immunoglobulin
 of
 EMBL/GenBank/DDBJ
 Hewick
on as a
 human
 species
 Chung
 163:1056-1062(1989)
 ٧.,
 SER-32
 0f
 Evers R.F.,
 G.,
 ₩
 M.-W.,
 R., Clark S., hematopoietic
 f., Revel M.
defines for
inducible
 cell
 coding
 hybridoma
 Muratani K.,
 Derynck
 AND
 expression
 stimulatory
 interleukin-6
 Lee
 VAL-162.
 for
 BSF-2 mRNA causes
 Pannekoek
 K.L.,
 R.,
 growth
 an
 þу
 human
 Matsuda T.,
 Ogawa M.;
colony-stimulating
 Tavernier
 growth-stimulatory
 inducible
 in
 Poel
 factor-2
 factor
 mouse
 expression
 _
|
| |
 н.,
 a
 Ŀ.,
 ij
 26-kDa
 NIH3T3
 in
 ťΥ
 of
 0
```

```
MEDLL...
Xu G.-Y., Yu ...
 truncated form of recombinant human interleukin-6 cont disulfide bond.";
 somers W., Stahl M., Seehra J.S.; | "1.9-A crystal structure of interleukin mode of receptor dimerization and signal EMBO J. 16:989-997(1997).
use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
 This
 Clogston C.L., Boone T.C., Crandall B.C., Mendiaz "Disulfide structures of human interleukin-6 are shuman granulocyte colony stimulating factor."; Arch. Biochem. Biophys. 272:144-15i(1989).
 Breton J., la Fiura A., Bertolero F., (
Ziliotto R., de Filippis V., Polverino
"Structure, stability and biological p
 MEDLINE=97224126; Pul
Somers W., Stahl M.,
 STRUCTURE BY NMR. MEDLINE=97303053;
 alpha-helical human IL-6.";
 Luetticken C., Kruettgen A., Moeller C., Heinrich P.C., "Evidence for the importance of a positive charge and an alpha-helical structure of the C-terminus for biological
 SEQUENCE OF 50-212 OF RECOMBINANT MEDLINE=95154344; PubMed=7851440;
 "Solution structure
J. Mol. Biol. 268:46
 Biochemistry
 by NMR
 Nishimura C., Watanabe A., Gouda H!, Shimada I., Arata Y., "Folding topologies of human interleukin-6 and its mutants
 Nishimura C.,
 MEDLINE=96134845; PubMed=8555185; Nishimura C., Watanabe A., Gouda
 STRUCTURE BY
 MEDLINE=91243808; PubMed=2037043;
 MUTAGENESIS
 MEDLINE=89286115;
 DISULFIDE BONDS
 van Damme J.,
 MEDLINE=88154445;
 Submitted
 factor
 Lymphocyte-activating
 Separation and
 ween the Swiss Institute of Bioinforma
European Bioinformatics Institute. The
by non-profit institutions as long
 FUNCTION: IL6 IS A CYTOKINE WITH A WIDE VARIETY OF BIOLOGICAL FUNCTIONS: IT PLAYS AN ESSENTIAL ROLLE IN THE FINAL DIFFERENTIATION OF B-CELLS INTO IG-SECRETING CELLS, IT INDUCES MYELOMA AND PLASMACYTOMA GROWTH, IT INDUCES NERVE CELLS DIFFERENTIATION, IN HEPATOCYTES IT INDUCES ACUTE PHASE REACTANTS.
 SUBCELLULAR SIMILARITY:
 DATABASE: NAME=R&D Systems' cytokine mini-reviews: IL6;
WWW="http://www.rndsystems.com/asp/g_sitebuilder.asp?bodyId=208".
 SIMILARITY: BELONGS TO THE IL-6 SUPERFAMILY DATABASE: NAME=R&D Systems' cytokine mini-ro
 SWISS-PROT entry
 CRYSTALLOGRAPHY (1.9
 spectroscopy.";
nistry 35:273-281(1996).
 cyte-activating factor act (HGF). Identification of unol. 140:1534-1541(1988).
 Biochem.
 QF,
 g R.;
(OCT-2001)
 Yu H.-A.,
 282:265-267(1991).
 30-63
 NMR.
 van
 268:468-481(1997).
 comparison
 LOCATION: Secreted.
 227:573-581(1995).
 PubMed=9118960;
 PubMed=9159484;
 PubMed=2472117;
 Beeumen
 PubMed=3279116;
Beeumen J., Dec
 of recombinant
 Hong J.,
 ç
 is copyright. stitute of Bio.
 Bertolero
 the EMBL/GenBank/DDBJ
 ANGSTROMS).
 of two
 Stahl'M.,
 activity:
of leukocy
 Decock
 ght. It is produced through a collaboration
Bioinformatics and the EMBL outstation
 leukocyte-derived
 signaling
 ٠.
 FORM
 monokines
 human
 ₿.,
 Orsini
 McDonagh T.,
 LACKING
 6:
 There are no restrictions in as its content is in
 van
 interleukin-6.";
 implications
 with
beta
 G.,
 Usage
 Snick
 databases
 FIRST
 z E.A., I
similar
 and h
 Valsasina
 containing
 γď
 Kay L.E.,
 N-terminally ntaining a si
 hybridoma
F as IL-6.
 DISULFIDE
 Fontana
 de
 and
 Rose-John
 Ľ
 for
 activity
 ξ
 Ley
 25
 Ξ
 В
 ø
 those
 for
 collaboration
 Α.,
 Υ,
 novel
 studied
 single
 of
 of
 no
no
 way
```

http://www.isb-sib.ch/announce/

```
δÃ
 밁
 Query Match
Best Local S
Matches 4
 ULT 45
MACFA
 Tatsumi M.;
Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
-i- FUNCTION: IL6 IS A CYTOKINE WITH A WIDE VARIETY OF BIOLOGICAL
FUNCTIONS: IT PLAYS AN ESSENTIAL ROLE IN THE FINAL DIFFERENTIATION
OF B-CELLS INTO IG-SECRETING CELLS, IT INDUCES MYELOMA AND
PLASMACYTOMA GROWTH, IT INDUCES NERVE CELLS DIFFERENTIATION, IN
HEPATOCYTES IT INDUCES ACUTE PHASE REACTANTS (BY SIMILARITY).
 3D-structure.
SIGNAL
CHAIN
 DISULFID
DISULFID
CARBOHYD
 IL6_MACFA STANDARD; PRT; 2
P79341;
15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
Interleukin-6 precursor (IL-6).
 Propuls, 1.5; 1.
SMART; SM00126; IL6; 1.
PROSITE; PS00254; INTERLEUKIN_6; 1.
PROSITE; PS00254; INTERLEUKIN_6; 1.
 InterPro; IPR003573; IL6_MGF_GCSF.
InterPro; IPR003574; Interleukin_6
 Pfam; PF00489; IL6; 1
PRINTS; PR00439; IL6GCSFMGF.
 PrODom; PD004356; Interleukin_6; 1
SMART; SM00126; IL6; 1.
 EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
 Cercopithecinae;
 Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
 PDB; 1IL6; 04-FEB-98.
PDB; 2IL6; 04-FEB-98.
PDB; 1ALU; 03-JUN-98.
Genew; HGNC:6018; IL6.
 PIR; A32648; IVHUB2.
PIR; A25921; A25921.
 ++
 SEQUENCE
 NCBI_TaxID=9541;
 Macaca fascicularis
 160 NLDA 163
 Local Similarity
 1 NLDA 4
 L; X04430; CAA28026.1; -.

L; M14584; AAA52728.1; -.

L; Y04602; CAA28268.1; -.

L; Y00081; CAA68278.1; -.

L; M18403; AAA52729.1; -.

L; M29150; AAA55154.1; -.

L; X04402; CAA27990.1; -.

L; X04403; CAA27991.1; -.

L; X04403; AAC41704.1; -.

L; M54894; AAC41704.1; -.

L; A55892; AAD11886.1; -.

L; BC015511; AAH15511.1; -.

L; A09363; CAAA0839.1; -.
 SUBCELLULAR LOCATION: Secreted. SIMILARITY: BELONGS TO THE IL-6 SUPERFAMILY.
 4
 FROM N.A.
 100.0%; ilarity 100.0%; Conservative
 1
30
72
101
73
 Macaca.
 29
212
78
111
73
 Interleukin_6.
 0;
 N-LINKED (GLCNAC.
 INTERLEUKIN-6
 Pred. No. 2.1e+02;
 Score 20;
 Mismatches
 on update)
 212
 Å
 DB 1;
 0;
 Length 212;
 Indels
 0;
 Gaps
 0;
```

```
Search completed: February Job time: 7.33333 secs
 망
 Ş
 Query Match
Best Local S
Matches 4
 DISULFID
DISULFID
CARBOHYD
CARBOHYD
SEQUENCE
 BMBL; AB000554; BAA19148.1; -.
HSSP; P05231; 1IL6.
InterPro; IPR003573; IL6_MGF_GCSF.
InterPro; IPR003574; Interleukin_6.
Pfam; PF00489; IL6; 1.
 use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
 1 NLDA 4
|||||
160 NLDA 163
 CHAIN
 SIGNAL
 Cytokine; Glycoprotein; Growth
 SMART; SM00126; IL6; 1. PROSITE; PS00254; INTERLEUKIN_6;
 ProDom;
 PRINTS; PR00433;
 European Bioinformatics Institute.
 PD004356; In
SM00126; IL6;
 Similarity 4; Conserv
 212
 100.0%; ilarity 100.0%; Conservative
 101
101
101
172
172
 AA;
 IL6GCSFMGF.
 Interleukin_6;
 23654 MW;
 6,
 2003, 11:16:51
 0;
 POTENTIAL.

POTENTIAL.

N-LINKED (GLCNAC. . .) (POTENTIAL).

N-LINKED (GLCNAC. . .) (POTENTIAL).

CF8173FCBF0B0389 CRC64;
 Score 20; DB Pred. No. 2.1); Mismatches
 INTERLEUKIN-6.
 BY SIMILARITY
 factor;
 Signal.
 There are no rest
 2.1e+02;
 DB 1;
 0;
 Length 212;
 Indels
 restrictions
 0
 Gaps
 on
 0
```

| • |    |      |  |   |  |
|---|----|------|--|---|--|
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  | • |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   | Ä. |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    | <br> |  | · |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |
|   |    |      |  |   |  |

```
Result
No.
 Database
 Post-processing: Minimum Match 100%
Maximum Match 100%
Listing first 45 summaries
 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
 Title:
Perfect score:
 OM protein - protein search, using sw model
 Total number of hits satisfying chosen parameters:
 Searched:
 Scoring table:
 Run on:
 55
66
67
77
110
111
111
113
113
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 Score
 Query
Match
 SPTREMBL_21:*
1: sp_archea:*
2: sp_bacteria
3: sp_fungi:*
 5...
6...
7...
9...
10...
11...
11...
11...
 PAT943-6
20
1 nlda 4
 100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
 100.0
100.0
 100.0
 February 6, 2003, 11:16:00; Search time 21.3333 Seconds (without alignments) 38.634 Million cell updates/sec
 671580 seqs, 206047115 residues
 BLOSUM62
Gapop 10.0 ,
 GenCore version 5.1.3 Compugen Ltd
 sp_archea:*
sp_bacteria:*
sp_fungi:*
 sp_rodent:*
sp_virus:*
sp_vertebrate:*
sp_unclassified:*
sp_rvirus:*
sp_rvirus:*
sp_bacteriap:*
sp_archeap:*
 sp_phage: *
 sp_invertebrate:*
sp_mammal:*
 sp_organelle:*
 sp_mhc:*
 sp_plant:*
 Length
 Gapext 0.5
 DB
 Q9BM03
Q9GTC2
Q9GTB2
Q9GTB4
Q9GTB5
Q9GTB9
 ID
 SUMMARIES
 2343
Q9bm03 dugesia tig
Q9gtc2 plasmodium
Q9gtc2 plasmodium
Q9gtb2 eimeria ten
Q9gta9 sarcocystis
Q9gta9 sarcocystis
Q9gt95 cryptospori
Q9n194 macaca mula
Q9n193 gorilla gor
Q9n192 pan troglod
Q9n191 hylobates 1
Q53399 escherichia
Q9q582 human immun
Q8t643 ceratitis c
Q8t648 ceratitis c
Q8t648 thermoanaer
Q99zy5 streptococc
 Description
```

| 7.000000000000000000000000000000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 17<br>18<br>19<br>20<br>21         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| 222222222222222222222222222222222222222                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 222222                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 100.0                              |
| 7,2<br>7,3<br>7,5<br>7,5<br>7,5<br>8,0<br>8,0<br>8,0<br>8,0<br>8,0<br>8,0<br>8,0<br>8,0<br>8,0<br>8,0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 57<br>66<br>69<br>71               |
| 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 12<br>12<br>12                     |
| 09591W2 09591W2 09591W2 0967641 08X089 08T640 098X08 08X685 08T641 098X685 092J16 0994W4 007938 097KS3 097KS3 097KS3 097KS3 097KS3 097KS3 097KS3 097KS3                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Q91THO Q96X11 Q9TXY3 Q8VAI7 Q93PT2 |
| Oystw 2 stapnylococ<br>O95641 homo sapien<br>Q8x2g0 escherichia<br>Q9pnd7 campylobact<br>Q8xvb9 ralstonia s<br>Q8t640 apis mellif<br>Q9axx2 brassica na<br>Q9axx0 brassica ca<br>Q8xx65 escherichia<br>Q8xx65 escherichia<br>Q8xx67 hellocbacte<br>Q9xx67 hellocbacte<br>Q9xx67 rickettsia<br>Q92j16 rickettsia<br>Q92j16 rickettsia<br>Q92j16 rickettsia<br>Q97k3 clostilus su<br>Q97k3 clostilus su<br>Q97k3 clostridium<br>Q97s22 escherichia<br>Q99b35 hellocverpa<br>Q8xau6 yersinia pe<br>Q9X090 neisseria m<br>Q79692 stigmatura<br>Q9y9p1 drosophila<br>Q979x3 pseudomonas<br>Q90641 anabas test | - 0                                |

## ALIGNMENTS

| RESULT<br>Q9GTC2<br>ID Q<br>AC Q<br>DT 0 | Qу                             | M B Q                                                     | SQ                      | H H        | R               | RL                    | 27 A                        | 2 2                                | RC                | RP                 | RN  | õ                | ဂ္ဂ                               | გ                                    | $_{\rm so}$                  | DE             | DŢ                      | DT               | DJ ?           | SU           | Q9BM03 |
|------------------------------------------|--------------------------------|-----------------------------------------------------------|-------------------------|------------|-----------------|-----------------------|-----------------------------|------------------------------------|-------------------|--------------------|-----|------------------|-----------------------------------|--------------------------------------|------------------------------|----------------|-------------------------|------------------|----------------|--------------|--------|
| 2<br>9GTC2;<br>1-MAR-2001                | 1 NLDA 4<br>    <br>15 NLDA 18 | Query Match Best Local Simi: Matches 4;                   | Ħ                       | NON TER    | EMBL; AY014003; | Proc. Natl.           | "Transposable elements      | MEDLINE=2057                       | TRANSPOSON-MARM1; | SEQUENCE FROM N.A. | [1] | NCBI_TaxID=6162; | Paludicola; I                     | Eukaryota; M                         | Dugesia tigr:                | æ              |                         |                  | 01-JUN-2001    |              | M03    |
| PRELIMINARY;                             |                                | h 100.0%;<br>Similarity 100.0%;<br>4; Conservative        | <br>                    | 1<br>26 26 | AAG599          | Natl. Acad. Sci. U.S. |                             | MEDLINE=20570504; PubMed=11121049; | RM1;              | N.A.               |     | .62;             | Paludicola; Dugesiidae; Girardia. | Eukaryota; Metazoa; Platyhelminthes; | Dugesia tigrina (Planarian). | transposase (F |                         |                  | TrEMBLrel. 17, | PRELIMINARY; |        |
|                                          |                                | Score<br>Pred.<br>0; Mis                                  |                         |            | .1              | A. 97                 | in sexual and               | 121049;                            |                   |                    |     |                  |                                   |                                      | •                            | (Fragment).    |                         | Last             | Created)       | PRT;         |        |
| PRT; 33 AA.                              |                                | 20; DB 5; Length 26;<br>No. 1.5e+02;<br>matches 0; Indels | 74DlaD8CA4ADA347 CRC64; |            |                 |                       | and ancient asexual taxa."; |                                    |                   |                    |     |                  |                                   | Turbellaria; Seriata;                |                              |                | Last annotation update) | sequence update) |                | 26 AA.       |        |
|                                          |                                | 0; Gaps                                                   |                         |            |                 | •                     | ••                          |                                    |                   |                    |     |                  |                                   | Tricladida;                          |                              |                |                         |                  |                |              |        |

0;

```
RESULT RESULT PERSULT OF STATE RESULT
Q9GTA9
 DЬ
 QΥ
 2
OCC OF PRINT
 Вþ
 Query Match
Best Local S
Matches 4
 SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

MEDLINE=21215633; PubMed=11318578;

Heintzelman M.B., Schwartzman J.D.;

"Myosin diversity in Apicomplexa.";

"Myosin diversity in Apicomplexa.";

J. Parasitol. 87:429-43(2001).

J. Parasitol. 87:429-43(2001).

REMBL, AF773845; AAG29107.1;

REMBL, AF773845; AAG29107.1;

RINGEROP TO THE TO T
 Query Match
Best Local :
 Matches
 O9GTA9;
Q9GTA9;
01-MAR-2001 (TrEMBI
01-MAR-2001 (TrEMBI
01-DEC-2001 (TrEMBI
01-DEC 2001 (TrEMBI
Myosin B (Fragment)
Sarcocystis muris;
 Q9GTB2;
Q9GTB2;
01-MAR-2001
 NON_TER
 NON_TER
 SEQUENCE
 SEQUENCE FROM N.A.
MEDLINE=21215633; PubMed=11318578;
Heintzelman M.B., Schwartzman J.D.;
"Myosin diversity in Apicomplexa.";
 Eimeria
 Eukaryota; Alveolata;
 Eimeria tenel
 01-DEC-2001
Myosin E (F:
 SEQUENCE
 NCBI_TaxID=5833;
[1]
 Plasmodium falciparum.
Eukaryota; Alveolata;
 01-DEC-2001
Myosin D (F)
 ProDom;
 NCBI_TaxID=5802;
 Eukaryota; Alveolata;
NCBI_TaxID=5813;
 Sarcocystis
 InterPro;
 4
 17
 17
 Parasitol. 87:429-432(2001).
BL; AF73855; AAG29117.1; -
terPro; IPR001609; myosin_head.
DDom; PD000355; myosin_head; 1.
 1 NLDA
 ۳
 NLDA
 NLDA
 NLDA
 Similarity
4; Conser
 4;
 Similarity
 (Fragment).
 (Fragment)
 (Fragment).
 4
 20
 4
 20
 1 (TrEMBLrel.
1 (TrEMBLrel.
1 (TrEMBLrel.
 (TrEMBLrel.
(TrEMBLrel.
(TrEMBLrel.
 \omega_{\omega}
 33 AA;
 (TrEMBLrel.
 Conservative
 Conservative
 PRELIMINARY;
 PRELIMINARY;
 ω
 \omega
 AA;
 3638
 3638
 100
 100.0%;
 Apicomplexa;
 Apicomplexa;
 Apicomplexa; Coccidia; Eimeriida;
 WW;
 16,
16,
 MW;
 19,
 16,
19,
 .0%;
 Created)
Last sequence
Last anno
 Created)
Last sequ
Last anno
 Last annotation
 0
 0;
 Score
Pred.
 2E0CFB42104F2290 CRC64;
 2E0CFB42104F2290 CRC64;
 PRT;
 PRT;
 Pred.
 Score
 Mismatches
 Mismatches
 sequence up
 sequence up
annotation
 Haemosporida; Plasmodium
 Coccidia;
 No.
 NO.
 20;
 \mathfrak{s}
 33
 2e+02;
 2e+02;
 A
 ΑA
 DВ
 update)
 update)
 ហ
 update)
 update)
 update)
 Eimeriida;
 0;
 0;
 Length 33;
 Length
 Indels
 Indels
 33;
 Eimeriidae;
 Sarcocystidae;
 0,
 0;
 Gaps
 Gaps
 0;
 0;
```

```
RESULT
Q9GTA2
REL TO THE METERS OF THE PROPERTY OF THE PROPE
 RA RA DR DR FTT SQ
 В
 Qy
 В
 Q
 RESULT
 Query Match
Best Local S
Matches 4
 Query Match
Best Local S
Matches 4
 01-MAR-2001 (TrEMBLIRE
01-MAR-2001 (TrEMBLIRE
01-DEC-2001 (TrEMBLIRE
Myosin D (Fragment).
 SEQUENCE FROM N.A. MEDLINE-21215633; PHeintzelman M.B., S "Myosin diversity i J. Parasitol. 87:42
 01-MAR-2001 (TrEMBLr
01-MAR-2001 (TrEMBLr
01-DEC-2001 (TrEMBLr
Myosin D (Fragment).
 NON_TER
SEQUENCE
 NON_TER
 MEDLINE=2121563; PubMed=11318578
Heintzelman M.B., Schwartzman J.D.
"Myosin diversity in Apicomplexa.
J. Parasitol 87:429-432(2001).
 Eukaryota; Alveolata; Apicomplexa; Coccidia;
Cryptosporidiidae; Cryptosporidium:
NCBI_TaxID=5807;
 MEDLINE-21215633; PubMed-113185

Heintzelman M.B., Schwartzman J

"Myosin diversity in Apicomplexa

J. Parasitol 87:429-432(2001).
 Q9GTA2;
 Q9GTA2
 Cryptosporidium
 Q9GT95;
 Q9GT95
 NON_TER
 ProDom;
 EMBL;
 SEQUENCE FROM N.A.
 NCBI_TaxID=5865;
 Eukaryota;
 Babesia bovis
 SEQUENCE
 ProDom;
 EMBL;
 SEQUENCE FROM N.A.
 InterPro;
 [nterPro;
 S
 6
 17 NLDA 20
 17 NLDA 20
 1 NLDA 4
 1 NLDA 4
 rasitol. b:****
AF273858; AAG29120.1; -.
Pro; IPR001609; myosin_head.
Pro; IPR075; myosin_head; 1.
 AF273865; AAG29127.1; -. Pro; IPR001609; myosin_head.
 4;
 Similarity
 Similarity 100
4; Conservative
 PD000355;
 1 (TrEMBLrel.
1 (TrEMBLrel.
1 (TrEMBLrel.
 Alveolata;
 33 AA;
 \frac{3}{3}
 (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
 Conservative
 PRELIMINARY;
 PRELIMINARY;
 AΑ;
 parvum.
 y in Apicomplexa."
:429-432(2001).
 PubMed=11318578;
Schwartzman J.D.
in Apicomplexa."
 PubMed=11318578; Schwartzman J.D.;
 myosin_head;
 3638
 3638
 100.0%;
 100.0%;
 Apicomplexa;
 MW;
 16,
16,
 MW;
 16,
19,
 Created)
Last seg
Last ann
 Created)
Last sequ
Last anno
 0;
 0;
 Score 20;
Pred. No.
 2E0CFB42104F2290 CRC64;
 Score
Pred,
 2E0CFB42104F2290 CRC64;
 . D.;
 Mismatches
 Mismatches
 sequence u
annotation
 sequence update) annotation update)
 _|Piroplasmida; Babesiidae; Babesia.
 20;
No.
 \omega_{\omega}
 ű
 2e+02;
 2e+02;
 DB
 Ą
 DB
 B
 5
 5
 update)
 Eimeriida;
 0
 Length
 Length
 Indels
 Indels
 33
 0;
 0;
 Gaps
 Gaps
 0
 0
```

```
Š
 DR
DR
FT
SQ
 밁
 Ş
 밁
 Query Match
Best Local S
Matches 4
 Query Match
Best Local S
Matches 4
 Q9N194;
Q9N194;
Q1-OCT-2000
Q1-OCT-2000
Q1-MAR-2001
 SEQUENCE FROM N.A.

MEDLINE-20241821; PubMed-10777682;

Behrends S., Vehse K.;

The beta(2) Subunit of Soluble Guanylyl Cyclase Contains Specific Frameshift and Is Expressed in Gastric Carcinoma Biochem. Biophys. Res. Commun. 271:64-69(2000).

EMBL; AF218385; AAF66107.1; -.

NON_TER 1
 09N193;
01-OCT-2000 (TrEMBLrel. 15,
01-OCT-2000 (TrEMBLrel. 15,
01-MAR-2001 (TrEMBLrel. 16,
Soluble guanylyl cyclase sub
 NON_TER
NON_TER
SEQUENCE
 NON_TER
 SEQUENCE FROM N.A.

MEDLINE-20241821; PubMed-10777682;

Behrends S., Vehse K.;

"The beta(2) Subunit of Soluble Guanylyl Cyclase Specific Frameshift and Is Expressed in Gastric C Specific Frameshift and IS Expressed in Gastric C Biochem. Biophys. Res. Commun. 271:64-69(2000).

EMBL; AF218384; AAF66106.1; -.
 01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-MAR-2001 (TrEMBLrel. 16, Last annotation update)
SOluble guanylyl cyclase subunit beta 2 (Fragment).
 InterPro; IPR001609; myosin_head;
ProDom; PD000355; myosin_head;
 Eukaryota; Metazoa;
Mammalia; Eutheria;
 GUCY1B2.
 Q9N193
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
 GUCY1B2
 EMBL; AF273872; AAG29134.1;
 Gorilla gorilla (gorilla)
 NCBI_TaxID=9544;
 Cercopithecinae;
 Macaca mulatta (Rhesus macaque).
 æ
 28
 17
 1 NLDA 4
 1 NLDA 4
 NLDA
 NLDA 31
 4;
 Similarity
 Similarity
4; Conser
 20
 IPR001609; myosin_head
 33 AA;
 41 AA;
 100.0%; ilarity 100.0%; Conservative
 Conservative
 PRELIMINARY;
 PRELIMINARY;
 Macaca.
 4948
 3638 MW;
 Chordata;
Primates;
 100
 MW.
 15, Last
16, Last
subunit
 .0%;
 0;
 0
 Created)
 Score 20; DE
Pred. No. 2.5
); Mismatches
 31ACA70C43358DC1 CRC64;
 Score
Pred.
 2E0CFB42104F2290 CRC64;
 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Gorilla.
 PRT;
 Mismatches
 sequence update)
annotation update)
beta 2 (Fragment).
 20;
No.
 DB 6;
,. 2.5e+02;
0;
 41
 41
 DB 5;
2e+02;
 ₹
 A
 0,
 Length 41;
 Carcinoma.
 Length 33;
 Contains
 Indels
 Indels
 _ p
 .
≖ ₪
 Human.
 0;
 Human-
 0;
 Gaps
 Gaps
 0
 0
```

```
ACCOMENS AND ACCOMENS RESULT
Q9N192
 В
 Qy
 멍
 Ş
 SQ
 Q9N191
 RESULT 10
 Query Match
Best Local S
Matches 4
 Query Match
Best Local
 Matches
Query Match
Best Local Similarity
 Q9N192;
Q9N192;
 NON_TER
SEQUENCE
 EMBL; AF2
NON_TER
NON_TER
SEQUENCE
 NON_TER
NON_TER
SEQUENCE
 01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
Soluble guanylyl cyclase subunit beta 2 (Fragment).
 Behrends S., Vehse K.;
"The beta(2) Subunit of
Specific Frameshift and
 Eukaryota; Metazoa; Chordata; Mammalia; Euthería; Primates;
 01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2000 (TrEMBLrel. 15, 01-JUN-2001 (TrEMBLrel. 17,
 Behrends S., "The beta(2)
 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
NCBI_TaxID=9580;
 Q9N191;
 Q9N191
 Pan troglodytes (Chimpanzee).
Eukaryota; Metazoa; Chordata;
 SEQUENCE FROM N.A.
MEDLINE=20241821; PubMed=10777682;
 Hylobates lar (Common gibbon).
 GUCY1B2
 SEQUENCE FROM N.A.
MEDLINE=20241821; PubMed=10777682;
 NCBI_TaxID=9598;
 GUCY1B2
 Biochem.
 Specific
 EMBL;
 Biochem.
 9
 28
 28
 1 NLDA 4
 NLDA
 NLDA 4
 NLDA
 AF218386;
 am. Biophys. Res. Common AF218387; AAF66109.1;
 guanylyl
 Similarity
4; Conser
 Similarity
 a(2) Subunit of Soluble Guanylyl Cyclase Contains Frameshift and Is Expressed in Gastric Carcinoma Biophys. Res. Commun. 271:64-69(2000).
 Biophys. Res. Commun.
218386; AAF66108.1; -.
 31
 31
 41
 41 AA;
 41 AA;
 100.0%;
llarity 100.0%;
Conservative
 PRELIMINARY;
 PRELIMINARY;
 Conservative
 Vehse
 41
 ÃĄ;
 cyclase
 4847
 4888
 4888 MW;
 100.0%;
100.0%;
 . Commun.
 WW;
 MW;
 Is Expressed in Gastric Commun. 271:64-69(2000).
 Soluble Guanylyl Cyclase Contains Is Expressed in Gastric Carcinoma
 15, Last sequence update)
17, Last annotation update)
subunit beta 2 (Fragment).
 0;
 0
 Created)
 Score 20; DB Pred. No. 2.5); Mismatches
 31ACA718FC7E6DC1 CRC64;
 Score 20; DB Pred. No. 2.5); Mismatches
 31ACA718FC7E6DC1 CRC64;
 0B9F972BFC7E6DDB CRC64;
Score
Pred.
 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hylobatidae; Hylobates.
 Craniata; Ve Catarrhini;
 NO;
NO;
 41
DB 6;
2.5e+02;
 Vertebrata;
 2.5e+02;
 A
 DВ
 DB 6;
 Hominidae;
 .5e+02;
 9
 Length 41;
 Length
 Indels
 Indels
 Euteleostomi;
 41;
 a Human-
.";
 Human-
 0;
 0;
 Gaps
 0;
 0
```

Matches

Conservative

0;

Mismatches

0;

Indels

0;

Gaps

0;

```
밁
 δÃ
 RESULT
 日
 γ
 Query Match
Best Local S
Matches 4
 Query Match
Best Local S
Matches 4
 Q9Q582
Q9Q582;
01-MAY-2000
01-MAY-2000
01-JUN-2002
 NON_TER
 Plasmid.
NON_TER
SEQUENCE
 Q53299;
01-NOV-1996
01-NOV-1996
01-JUN-2002
 Wang B., Saksena N.K.;
"HIV-1 Strains from a cohort of
of a V2 region extension unique
 SEQUENCE FROM N.A.

MEDLINE=93159149; PubMed=8381641;

Menard R., Molinas C., Arthur M., Duval J., Courvalin P.

"Overproduction of 3'-aminoglycoside phosphotransferase resistance to tobramycin in Escherichia coli.";

Antimicrob. Agents Chemother. 37:78-83(1993).

EMBL; S54065; AAD13871.1;

InterPro; IPR002575; APH.
 progressors.";
AIDS 0:0-0(2000).
EMBL; AF203211; AAF24360.1;
AIDS; Coat protein; Glycopr
 SEQUENCE FROM N.A.
 Viruses; Retroid viruses; NCBI_TaxID=11676;
 Human immunodeficiency
 Envelope
 Pfam; PF01636; APH;
 NCBI_TaxID=562;
 Escherichia
 Bacteria;
 Plasmid pIP1518
 Escherichia coli.
 12
 18
 11
 28
 1 NLDA
 ب
 NLDA
 NLDA
 NLDA
 protein (Fragment).
 Similarity 4; Conser
 2000 (TrEMBLrel. 1:
2000 (TrEMBLrel. 1:
2002 (TrEMBLrel. 2:
e glycoprotein V2:
 4;
 Similarity
 21
 4
 Proteobacteria;
 31
 4
 42
 1
42
? AA;
 42
 6 (TrEMBLrel. 01, 6 (TrEMBLrel. 01, 21, 22)
 100.0%;
ilarity 100.0%;
Conservative (
 100.0%;
llarity 100.0%;
Conservative 0
 PRELIMINARY;
 42
2 AA;
 PRELIMINARY;
 42
4790
 42
4831
 Glycoprotein
 ۲.
 virus
 MW;
 13, Created)
13, Last sequence update)
21, Last annotation update)
2 region (Fragment).
 MW;
 cus type 1.
Retroviridae;
 gamma
 0;
 0;
 Created)
Last sequence update)
Last annotation updat
Score 20; DB Pred. No. 2.6); Mismatches
 DE78892C9F92A38B CRC64;
 D6894835CE244D87 CRC64;
 Score 20; DB 2;
Pred. No. 2.6e+02;
Mismatches 0;
 American subjects reveal the presence to slow progressors and non-
 subdivision;
 42
 42
 2.6e+02;
 Lentivirus
 DB 15;
 A
 ₿
 update)
 Enterobacteriaceae;
 Length 42;
 Length 42;
 ₽.,
 type
 Leclercq R.;
ype I confers
0;
 0
Gaps
 Gaps
0;
 0;
 В
 Qγ
 뫄
 Ş
 밁
```

```
RESULT
Q8T642
ID 642
ID 70
ID
RESULT
Q8RAW6
 Qy
 Query Match
Best Local Similarity
Matches 4; Conserv
 Matches
 Query Match
Best Local
 NON_TER
NON_TER
SEQUENCE
 Eukaryota; Met
Pterygota; Neo
Tephritoidea;
 Q8T642;
01-JUN-2002 (TrEMBLrel. 21,
01-JUN-2002 (TrEMBLrel. 21,
01-JUN-2002 (TrEMBLrel. 21,
 EMBL; AI
 integrin regulation.";
Submitted (FEB-2002) to the
EMBL; AF487331; AAL93260.1;
 SEQUENCE FROM N.A.
Bunch T.A., Miller S.W.,
Mutations in the C8-C9
 Ceratitis capitata (Mediterranean
Eukaryota; Metazoa; Arthropoda; Tr
 NCBI_TaxID=7213;
 Integrin betaPS4B (Fragment).
 Q8T642
 SEQUENCE
 NON_TER
 Submitted (FEB-2002)
 Bunch T.A., Miller Mutations in the
 Tephritoidea; Te
NCBI_TaxID=7213;
 Ceratitis capitata (Mediterranean fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; He
Pterygota; Neoptera; Endopterygota; Diptera;
Tephritoidea; Tephritidae; Ceratitis.
 01-JUN-2002 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
 SEQUENCE FROM N.A.
 Q8T643;
 Q8T643
 integrin
 Integrin betaPS4A (Fragment).
 15
 47
 14
 \vdash
 47 NLDA
 13
 22
 1 NLDA 4
 NLDA
 NLDA
 NLDA
 NLDA
 AF487330; AAL93259.1;
 Similarity
 regulation."
 50
 4
 50
 25
 4
 Neoptera; Endop
 50
 50
 Conservative
 Miller S.W., in the C8-C9
 Conservative
 PRELIMINARY;
 50
 PRELIMINARY;
 50
 AA;
 ĀΑ;
 50
5469
 5436 MW;
 100.0%;
 Arthropoda; Tracheata;
Endopterygota; Dipter
tidae; Ceratitis.
 50
 100.0%;
 loop
 21,
21,
21,
 W.
 Brower
loop of
 Brower
loop of
 loop
 .0%;
 0;
 Last
 Last
Last
 EMBL/GenBank/DDBJ
 Created)
 0;
 Last annotation
 EMBL/GenBank/DDBJ
 Score
Pred:
 Created)
 C82D2269C7016957
 610D4253BFFDF5C4
 Score
Pred:
 PRT;
 the
 Mismatches
 U
 the
 U
 Mismatches
 sequence
 sequence update) annotation update)
 fruit fly).
 No;
 Cheata; Hexapoda; Ins
 Drosophila
 20; DB 5;
No. 3.1e+02;
 Drosophila betaPS subunit affect
 50
 3.1e+02;
 DB
 AA
 A
 update)
 Hexapoda; Insecta;
u; Brachycera; Musc
 update)
 CRC64;
 databases
 0;
 CRC64;
 databases
 betaPS subunit affect
 Length 50;
 Length
 Indels
 Indels
 Insecta;
 50
 Muscomorpha;
 Muscomorpha;
 0;
 0;
 Gaps
 0
 0;
```

```
RESULT 17
Q91TH0
ID Q91TH
AC Q91TH
 ACCOUNT TO
 В
 ş
 밁
 Ş
 Query Match
Best Local S
Matches 4
 Matches
 Query Match
Best Local
 Q99ZY5;
Q99ZY5;
Q1-JUN-2001
01-JUN-2001
01-DEC-2001
Q91TH0;
 01-JUN-2002
01-JUN-2002
01-JUN-2002
 Q8RAW6;
 SEQUENCE FROM N.A.
STRAIN-SF370 / ARCC 700294 / SEROTYPE M1;
MEDLINE-21192684; PubMed-11296296;
MEDLINE-21192684; PubMed-11296296;
Ferretti J.J., McShan W.M., Ajdic D.J., Savic D.J., Savic G., I Primeaux C., Sezate S., Suvorov A.N., Kenton S., Lai H.S., Lin Qlan Y., Jia H.G., Najar F.Z., Ren Q., Zhu H., Song L., White J Yuan X., Clifton S.W., Roe B.A., McLaughlin R.;
"Complete genome sequence of an M1 strain of Streptococcus pyog Proc. Natl. Acad. Sci. U.S.A. 98:4658-4663(2001).
EMBL, AE006546; AAK33913.1; -
 Hypothetical protein SPY1017.
 MEDLINE-21992816; PubMed-11997336;
Bao Q., Tian Y., Li W., Xu Z., Xuan Z., Hu S.,
Chen Y., Xue Y., Xu Y., Lai X., Huang L., Dong
Tan H., Chen R., Wang J., Yu J., Yang H.;
"A complete sequence of T. tengcongensis genome
Genome Res. 12:689-700(2002).
EMBL, AE013071; AAN24319.1; ...
 Hypothetical protein; Complete proteome. SEQUENCE 54 AA; 6433 MW; SEDE5E737514DF91 CRC64;
 Bacteria; Firmicutes; Bacillus/o
Streptococcaceae; Streptococcus.
 Hypothetical protein; Complete proteome SEQUENCE 51 AA; 6136 MW; 9E966B9BFF4
 Bacteria; Firmicutes; Barthermoanaerobacteriales; NCBI_TaxID=119072;
 Thermoanaerobacter tengcongensis.

Bacteria; Firmicutes; Bacillus/Clostridium group; Clostridia;
Thermoanaerobacteriales; Thermoanaerobacteriaceae; Thermoanaerobacter.
 Hypothetical protein TTE1072.
 Streptococcaceae;
NCBI_TaxID=1314;
 Streptococcus
 SEQUENCE FROM N.A.
STRAIN-MB4T / JCM11007;
 16
 Local Similarity
 20
 12
 1 NLDA 4
 Local Similarity
 1 NLDA 4
 NLDA
 NLDA
 4;
 4.
 23
 15
 (TrEMBLrel.) (TrEMBLrel.)
 100.0%;
ilarity 100.0%;
Conservative (
 (TrEMBLrel. 17, Created)
(TrEMBLrel. 17, Last sequence up)
(TrEMBLrel. 19, Last annotation)
 PRELIMINARY;
 Conservative
 PRELIMINARY;
 PRELIMINARY;
 pyogenes.
 100.0%;
 TTE1072.
 SPy1017
 Bacillus/Clostridium
 21, 0
 tengcongensis genome.";
 Created)
Last sequence update)
Last annotation updat
 0;
 0;
 9E966B9BFF4F7993 CRC64;
 Score 20;
Pred. No. 3
 Score 20;
Pred. No.
 PRT;
 PRT;
 PRT;
 Mismatches
 Mismatches
 57
 54
 51
 3.2e+02;
 DB 16;
 A
 DB 16;
 ₿
 .4e+02;
 update)
 group; Lactobacillales;
 update)
 update)
 0,
 Dong X., 1
 Length
 Length
 Indels
 Indels
 g W., Ya
Ma Y.,
 Yang J.
 54;
 51;
 pyogenes.";
 0;
 0,
 Lyon K
in S.P.,
 Ŀ.
 Gaps
 Gaps
 0
 0
```

```
RESULT 19
Q9TXY3
 RESULT 18
Q96X11
 밁
 VΩ
 Дb
 Q
 IJ
 Query Match
 Matches
 Matches
 Query Match
Best Local
 Best
 01-DEC-2001
01-DEC-2001
01-DEC-2001
 01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequen
01-MAR-2002 (TrEMBLrel. 20, Last annota
Mating type 2 protein (Fragment).
Phaeosphaeria avenaria f. sp. triticae.
Eukaryota; Fungi; Ascomycota; Pezizomyc
Dothideomycetes et Chaetothyriomycetes
 Dai Q., Cui K., Ueng P.P.;
"Mating type gene in Phaeosphaeria avenaria f. sp. trit:
Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases
EMBL; AF358826; AAK51442.1;
InterPro; IPR000276; GPCR_Rhodpsn.
InterPro; IPR000910; HMG_12_box.
Pfam; PF00505; HMG_box; 1.
Q9TXY3
 Q96X11
 Darai G., Bahr U.;
Submitted (JUN-2000) to the
EMBL; AF281817; AAK57177.1;
SEQUENCE 57 AA; 6165 MW;
 Bahr U., Darai G.;
"Analysis and Characterization of the Complete
Shrew) Herpesvirus.";
J. Virol. 75:4854-4870(2001).
 SEQUENCE
 Viruses; dsDNA viruses,
Betaherpesvirinae.
 NON_TER
 STRAIN=ATCC26370;
 SEQUENCE FROM N.A.
 NCBI_TaxID=54790;
 Phaeosphaeriaceae; Phaeosphaeria.
 STRAIN-2;
 STRAIN=2;
 Tupaia herpesvirus
 NON_TER
 PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; UNKNOWN_1
 SEQUENCE
 MEDLINE=21211637;
 SEQUENCE FROM N.A.
 NCBI_TaxID=10397;
 Local
 53
 35
 1 NLDA 4
 1 NLDA 4
 NLDA
 NLDA 38
 Similarity
 Similarity
 FROM N.A.
 56
 66 AA;
 (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
 100.0%; llarity 100.0%; Conservative
PRELIMINARY;
 PRELIMINARY;
 Conservative
 66
 PubMed=11312357;
 7936 MW;
 66
 100.0%;
 19,
19,
19,
 ņo
 RNA stage; Herpesviridae;
 Created)
Last sequence up
 0,
 Last sequence up
 0;
 EMBL/GenBank/DDBJ databases
 532A84F37D334DBA CRC64;
 Score 20;
Pred. No.
 BD252F74B2C724A4 CRC64;
 Score 20;
Pred. No.
PRT;
 Pezizomycotina;
 Mismatches
 Mismatches
83
 66
 incertae
 4.2e+02;
 3.6e+02;
AA
 DB 3;
 .on update)
 DB 12;
 update)
 update)
 Genome of Tupaia (Tree
 Length
 Length
 Indels
 Indels
 triticae.";
 66;
 57;
 0;
 0,
 Gaps
 Gaps
 0;
 0
```

```
RESULTY
ORVENTAGE
ORVENTAG
 δÃ
 밁
 Best Loc
Matches
 Query Match
 Q8VAI7;
Q8VAI7;
01-MAR-2002 (TIEMB
01-MAR-2002 (TIEMB
01-JUN-2002 (TIEMB
WSy425 (WSSV484).
 01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence up
01-DEC-2001 (TrEMBLrel. 19, Last annotation
Hypothetical 7.7 kDa protein.
F46F5.8.
 Tsai M.F., Yu H.T., Tzeng H.F., Leu J.H., Chou C Wang C.H., Lin J.Y., Kou G.H., Lo C.F.; "Identification and characterization of a shrimg virus (WSSV) gene that encodes a novel chimeric
 SEQUENCE FROM N.A. STRAIN-TAIWAN;
 SEQUENCE FROM N.A.
Yang F., He J., Lin l
Submitted (DEC-2000)
 MEDLINE-21548311; PubMed-11689662; Yang F., He J., Lin X., Li Q., Pan "Complete genome sequence of the s
 White spot syndrome virus (WSSV). Viruses; unclassified viruses.
 EMBL; Arivor...
Hypothetical protein.
68 AA; 7672 MW;
 Submitted
 Waterston R.;
"Direct Submission.";
 STRAIN-BRISTOL
 Miller N., Wamsley P.,
"The sequence of C. ele
Submitted (NOV-1998) to
 SEQUENCE FROM N.A.
STRAIN-BRISTOL N2;
 SEQUENCE FROM N.A. STRAIN-BRISTOL N2; MEDLINE-99069613;
 Rhabditidae; Peloderinae; NCBI_TaxID=6239;
 Eukaryota; Metazoa;
 Caenorhabditis elegans
 SEQUENCE
 Science
 MEDLINE=20517548; PubMed=11062040;
 virus."
 NCBI_TaxID=92652;
 "Genome sequence of the nematode investigating biology. The C. election 282:2012-2018(1998).
 EQUENCE FROM N.A.
 20
 32
 Local
 ب
 Virol.
 NLDA
 NLDA 4
 tted (AUG-2001) to the AF106577; AAC78187.1;
 4
 Similarity
 FROM N.A.
 <u>ω</u>
 75:11811-11820(2001)
 (TrEMBLrel. (TrEMBLrel.
 Conservative
 (TrEMBLrel.
 PRELIMINARY;
 Lin X.,
 PubMed=9851916;
 elegans (
 Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
 100.0%;
 ç
 Twyman B.;
 Li Q., Pan D., Zhang X., the EMBL/GenBank/DDBJ dat
 20,
21,
 Caenorhabditis
 Created)
Last sequence
Last annotation
 0;
 cosmid F46F5.";
EMBL/GenBank/DDBJ
 EMBL/GenBank/DDBJ databases
 FB096444AC007693 CRC64;
 Score
Pred.
 ode C. elegans: a pl
elegans Sequencing
 PRT;
 Pan D., Z
he shrimp
 Mismatches
 sequence up
annotation
 No.
 20;
 69
 zhang x
p white
 4.3e+02;
 ₿
 DΒ
 shrimp
 update)
 update)
 update)
 5.
 update)
 e spot b
 X., Xu X.;
databases
 databases
 0;
 C.M.,
 platform for
ng Consortium.";
p white spot
polypeptide
 Length
 Indels
 bacilliform
 ×
 Huang
 68
 С.J.,
 syndrome of
 0;
 Gaps
 0;
```

```
Q33PT2
ID Q33PT2
AC Q93PT2
AC Q93PT2
DT 01-DEC
DT 01-DEC
DT 01-DEC
DT 01-EC
DT 01-EC
OC STACTOR
OC
Qy
 Db
 δÃ
 Query Match
Best Local (
 Matches
 Query Match
Best Local :
 Matches
 MEDLINE=21548656; PubMed=11689058; Liu W.J., Yu H.T., Peng S.E., Chand Y Huang C.J., Tsai M.F., Huang C.J., [Wa Kou G.H.; characterization, and phylowhite spot syndrome virus gene that Virology 289:362-377(2001).
 Q93PT2;
01-DEC-2001
01-DEC-2001
01-JUN-2002
 Pfam; PI
 SEQUENCE FROM N.A.
MEDLINE=21318691; PubMed=11425718;
Boels I.C., Ramos A., Kleerebezem M., de Vos W.M.;
"Functional Analysis of the Lactococcus lactis galu and Their Impact on Sugar Nucleotide and Exopolysaccharide F
 Virology [4]
 Submitted (OCT-2001) to the EMBL; AF332093; AAL33427.1; EMBL; AF440570; AAL89352.1;
 spot syndrome virus and charatargeting VP35 to the nuclei Virology 293:44-53(2002).
 Bacteria; Firmicutes;
Streptococcaceae; Lact
 STRAIN-TAIWAN;
Lo C.-F., Kou
 "Identification of a nucleocapsid protein (VP35) gene of shrimp spot syndrome virus and characterization of the motif important targeting VP35 to the nuclei of transfected insect cells.";
 SEQUENCE
 NCBI_TaxID=1359;
 Lactococcus
 SEQUENCE
 SEQUENCE FROM N.A.
 LO C.F.,
 MEDLINE=21844071;
 STRAIN-TAIWAN;
 SEQUENCE FROM
 Virology
 cellular-type thymidine kinase and Virology 277:100-110(2000).
 InterPro;
 Local Similarity
nes 4; Conserv
 53
 Local Similarity les 4; Conserv
 1 NLDA 4
 1 NLDA 4
 NLDA
 L.L., Leu J.H.,
 Environ. Microbiol. 67:3033-
AF304368; AAK71622.1; -
Pro; IPR001652; NAD_G1y3p_dh.
 PF01210; NAD_Gly3P_dh;
 Kou G.H.;
 56
 Kou G.-H.;
 69
 lactis (subsp. cremoris) (Strepirmicutes; Bacillus/Clostridium aceae; Lactococcus.
 (TrEMBLrel. 19, Created
(TrEMBLrel. 19, Last se
(TrEMBLrel. 21, Last an
phosphate dehydrogenase.
 Conservative
 PRELIMINARY;
 N.A.
 AΑ;
 AA;
 PubMed=11853398; '
 8135
 7916 MW;
 100.0%;
 100.0%;
 MW;
 the
 0;
 0;
 EMBL/GenBank/DDBJ
 Created)
 C.J., Wang C.H.,
 D06126B27C4BC8D5
 Score
Pred:
 Score
Pred.
 20754BFFC9B673FF CRC64;
 PRT;
 that
 phylogenetic a
that encodes a
 Mismatches
 Mismatches
 sequence update) annotation updat
 3040(2001).
 thymidylate kinase.";
 No.
 20;
No.
 (Streptococcus cremoris)
 a
 71
 DB 2;
4.6e+02;
 .
.
.
 4.4e+02;
 A
 DB 12;
 group; Lactobacillales;
 Chen
 update)
 analysis of a shrimp a protein kinase.";
 n H.V
Lin
 CRC64;
 databases
 Length 71;
 n J.Y., Lin
 S
 Length
 Indels
 Indels
 Wang
 d galE Genes a
Biosynthesis
 20.
 69;
 C.F.,
 c.
 0;
 0;
 white
for
 Gaps
 Gaps
 0;
 0,
```

밁

45

```
RESULT
095641
 SQUENCE PROPERTY OF THE PROPER
 Ş
 밁
 Query Match
Best Local s
Matches 4
Query Match
Best Local Similarity
 "Identification of 15 genes mapping to a region of chromosome encompassing the microsatellite markers D6S306 and D6S1260. Characterization of 3 genes encoding zinc finger proteins."; Submitted (NOV-1996) to the EMBL/GenBank/DDBJ databases. InterPro; IPR000822; Znf_C2H2.
 095641;
01-MAY-1999
01-MAY-1999
01-MAR-2002
 01-JUN-2001
01-JUN-2001
01-MAR-2002
 NON_TER
SEQUENCE
 Lancet 357:1225-1240(2001).

EMBL; AP003362; BAB57694 1; -.

EMBL; AP003134; BAB42624 1; -.

Hypothetical protein; Complete
SEQUENCE 72 AA; 8729 MW; 20
 Kuroda M., Ohta T., Uchiyama I., Baba T., Yuzawa H., Kobayashi Cui L., Oguchi A., Aoki K.-I., Nagai Y., Lian J.-Q., Ito T., Kanamori M., Matsumaru H., Maruyama A., Murakami H., Hosoyama Mizutani-Ui Y., Takahashi N.K., Sawano T., Inoue R.-I., Kaito Sekimizu K., Hirakawa H., Kuhara S., Goto S., Yabuzaki J., Kanehisa M., Yamashita A., Oshima K., Furuya K., Yoshino C., Shattori M., Ogasawara N., Hayashi H., Hiramatsu K.;
 Q99TW2;
 Eukaryota; Metazoa;
Mammalia; Eutheria;
 01-MAY-1999 (TrEMBLrel. 10, 0
01-MAY-1999 (TrEMBLrel. 20, 1
01-MAR-2002 (TrEMBLrel. 20, 1
01-MAR-2002 (TremBLrel. 20, 1
putative zinc (Inger protein
 095641
 Staphylococcus aureus (strain Mu50 / ATCC 700699), Staphylococcus aureus (strain N315).
 Hypothetical protein SAV1532. SAV1532 OR SA1362.
 DNA-binding; Zinc-finger.
 Homo sapiens (Human)
 SPECIES=S.aureus (strain Mu50), an MEDLINE=21311952; PubMed=11418146;
 Staphylococcus aureus
 PROSITE;
 NCBI_TaxID=9606;
 SEQUENCE FROM N.A.
 NCBI_TaxID=158878,
 Bacteria; Firmicutes;
 Whole genome sequencing of meticillin-resistant Staphylococcus
 23
 22
 20
 1 NLDA 4
 NLDA 23
 4;
 Similarity
 PS50157; ZINC_FINGER_C2H2_2;
 73
 100.0%;
ilarity 100.0%;
Conservative (
 (TrEMBLrel. 17, Creat
(TrEMBLrel. 17, Last
(TrEMBLrel. 20, Last
 PRELIMINARY;
 $
 158879;
 8172 MW;
 Chordata;
Primates;
 100.0%;
 Bacillus/Clostridium group; Bacillales;
 Last sequence update)
Last annotation update)
n H140 (Fragment)
 Last annotation
 Created)
 0;
 Created)
 ce proteome.
2C6891D3F09FD695 CRC64;
 A47E36C55C5ECA5A CRC64;
 Score
Pred.
 Score
Pred.
 Craniata; Vertebrata;
Catarrhini; Hominidae
 Mismatches
 and S.aureus (strain
 sequence
20;
No.
 NO;
 73
 72
 DB 4;
4.7e+02;
 DB 16;
4.6e+02;
 Ą
 ₿
 Hominidae;
 update)
 update)
 Length
 Length
 Indels
 Euteleostomi;
 N315);
 Kobayashi I., Ito T.,
 72;
 0;
 Shiba
 Ċ.,
 Gaps
 0
```

```
RESULT
Q8X2G0
 рь
 Ωy
 SO CENTRAL A RESERVATION OF THE SOCIETY OF THE SOCI
 g
 Ş
 RESULT
 Matches
 Query Match
Best Local
 Matches
 01-MAR-2002
01-MAR-2002
01-MAR-2002
 MEDLINE-21156231; PubMed-11258796;
Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoya Hayashi T., Makino E., Ohnishi M., Kurota T., Tanaka M., Tobe T Iida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasunag Kuhara S., Shiba T., Hattori M., Shinagawa H.;
Ruhara S., Shiba T., Hattori M., Shinagawa H.;
"Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7 and genomic comparison with a laboratory strain K-12.";
DNA Res. 8:11-22(201).
 Quail M.A., Rajandream M.A., Rut Whitehead S., Barrell B.G.; "The genome sequence of the food reveals hypervariable sequences. Nature 403:665-668(2000).

EMBL: AL139077; CAB73412.1; -.
 SEQUENCE FROM N.A.

STRAIN-NCTC 11168;

MEDILINE-2015.0912; PubMed-10688204;

MEDILINE-2015.0912; PubMed-10688204;

Parkhill J., Wren B.W., Mungall K., Ketley J.M., Churcher Basham D., Chillingworth T., Davies R.M., Feltwell T., Holle Basham D., Karlyshev A.V., Moule S., Pallen M.J., Penn C.W. Jagels K., Karlyshev A.V., Moule S., Pallen M.J., Penn C.W. Quail M.A., Rajandream M.A., Rutherford K.M., van Vliet A.
 01-OCT-2000 (TrEMBLrel.
01-OCT-2000 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
Complete proteome. SEQUENCE 75 AA;
 Bacteria; Proteobacteria; Campylobacter.
 Q9PND7;
 Q9PND7
 Hypothetical ECS1392.
 Campylobacter
 СЛ1158С
 Hypothetical protein.
SEQUENCE 73 AA; 8364 MW;
 SEQUENCE FROM N.A. STRAIN=0157:H7 / F
 Bacteria; P
Escherichia
 Escherichia coli 0157:H7
 Q8X2G0
 NCBI_TaxID=197;
 EMBL;
 NCBI_TaxID=83334;
 Q8X2G0;
 25
 67
 24
 15
 ш
 NLDA 70
 NLDA 4
 NLDA 18
 NLDA 4
 AP002554; BAB34815.1;
 Similarity 4; Conser
 4;
 Proteobacteria;
 (TrEMBLrel. 20, 2 (TrEMBLrel. 20, 20) (TrEMBLrel. 20, 20)
 (TrEMBLrel. 15, (TrEMBLrel. 15, (TrEMBLrel. 19,
 PRELIMINARY;
 Conservative
 PRELIMINARY;
 Conservative
 protein
 jejuni.
 RIMD
 protein.
9098
 100.0%;
 ECs1392.
 0509952;
MW;
 gamma
 epsilon subdivision; Campylobacter group;
 food-borne
 Last sequence update)
Last annotation updat
 Created)
 0
 Created)
 0
 Last sequence update)
Last annotation updat
825133ACB32C2EB7 CRC64;
 3F30F3233977E969 CRC64;
 PRT;
 Score
Pred.
 subdivision;
 Mismatches
 Mismatches
 20;
 73
 75
 pa thogen
 DB 16;
4.7e+02;
hes 0;
 B
 AA
 update)
 update)
 Enterobacteriaceae;
 0;
 Campylobacter jejuni
 Length
 Vliet A.H.M.,
 Indels
 Indels
 n C.W
 N., Yasunaga
 K., Yokoyama
M., Tobe T.,
 0;
 0;
 s:
 Gaps
 Gaps
 Τ.,
 ...
..
 0
 0;
```

```
QRESULT
QREVB9
ID VQQ
DT QRE
DT 011
DT 011
DT 011
DT 011
DT 01
DT 01
RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN RS
GN SS

 RESULT RESULT OF Qy
 밁
 Š
 Вþ
 Query Match
Best Local S
Matches 4
 Matches
 Query Match
Best Local
Query Match
Best Local Similarity
 Q8T640
Q8T640;
Q1-JUN-2002;
Q1-JUN-2002;
Q1-JUN-2002;
 Salanoubat M., Genin S., Artiguenave F., Gouzy J., Mar
Arlat M., Billault A., Brottier P., Camus J.C., Catto.
Chandler M., Choisne N., Claudel-Renard C., Cunnac S.,
Gaspin C., Lavie M., Moisan A., Robert C., Saurin W.,
Siguier P., Thebault P., Whalen M., Wincker P., Levy I
Weissenbach J., Boucher C.A.;
"Genome sequence of the plant pathogen Ralstonia solan
Nature 415:497-502(2002).
 EMBL; AL64bu/4; carried Hypothetical protein; Complete 75 AA; 8174 MW; 4F
 01-MAR-2002 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel.
 Q8XVB9;
 Q8XVB9
 STRAIN=GMI1000;
MEDLINE=21681879; PubMed=11823852;
 Ralstonia solanacearum (Pseudomonas solanacearum)
Bacteria; Proteobacteria; beta subdivision; Ralst
 Hypothetical protein RSc2912. RSC2912 OR RS00183.
 SEQUENCE FROM N.A. Bunch T.A., Miller
 Eukaryota; Metazoa; Arthropoda; Pterygota; Neoptera; Endopterygo Apoidea; Apidae; Apis.
 Integrin betaPS (Fragment).
Apis mellifera (Honeybee).
 SEQUENCE FROM N.A.
 NCBI_TaxID=305
 Bunch T.A., Miller S.W., Brow
"Mutations in the C8-C9 loop
 NCBI_TaxID=7460;
 26
 27
 Local
 64
 σ
 1 NLDA 4
 1 NLDA
 NLDA
 NLDA
 Similarity 4; Conserv
 Similarity
 ø
 67
 100.
ilarity 100.
Conservative
 100.
ilarity 100.
Conservative
 (TrEMBLrel.
 PRELIMINARY;
 PRELIMINARY;
100.
 Endopterygota;
 20, Created)
20, Last sequence update)
20, Last annotation update)
 21,
 Brower
loop of
 .0%;
.0%;
 .0%;
 Last sequence update)
Last annotation update)
 0;
 Created)
 EMBL/GenBank/DDBJ
 Score 20; DE Pred. No. 4.8
 Te proteome. 4F207A5B2B7FC58B
 Score 20; DB 16;
Pred. No. 4.8e+02;
; Mismatches 0;
 64AFCE43C0DFDC1A CRC64;
Score
Pred.
 PRT;
 D.L.
 Tracheata; Hexapoda; Insecta,
 Hymenoptera; Apocrita; Aculeata;
20;
No.
 Drosophila
 08
 75
 4.8e+02;
thes 0;
5.2e+02;
 Gouzy J., Mangenot S., s J.C., Cattolico L.,
 Ā
 A
 DB 16;
 DB
 Ralstonia group;
 CRC64;
 databases
 betaPS
 Levy M.,
 Length
 solanacearum.";
 Length
 Indels
 Indels
 S., Denne.,
W., Schiex T.,
 subunit affect
 Demange N.,
 80;
 75
 0;
 0
 Gaps
 Gaps
 0;
 0,
```

```
RESULT
Q9AXX0
 RESULT
Q9AXX2
 밁
 QY
 В
 Qy
 Matches
 Matches
 Query Match
Best Local
Pfam; PFO
NON_TER
NON_TER
SEQUENCE
 of Arabidopsis-known-function genes in Brassica.";
Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AF229405; AAKO0677.1; -.
HSSP; P15737; 1GHS.
InterPro: TDBCCCCC
 G9AXXO;
01-JUN-2001 (TrEMBLrel. 17, 0
01-JUN-2001 (TrEMBLrel. 17, 0
01-DEC-2001 (TrEMBLrel. 19, 0
Beta 1,3 glucanase (Fragment
 NON_TER
 Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosideurosids II; Brassicales; Brassicaceae; Brassica.
 Brassica napus (Rape).
Eukaryota; Viridiplantae;
 01-JUN-2001 (TrEMBLrel. 17, La. 01-DEC-2001 (TrEMBLrel. 19, La. Beta 1,3 glucanase (Fragment).
 Q9AXX2;
01-JUN-2001
 Eukaryota; Viridiplantae; Streptophyta; Embry
Spermatophyta; Magnoliophyta; eudicotyledons;
eurosids II; Brassicales; Brassicaceae; Brass
 of Arabidopsis-known-function genes in Brassica.";
Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AF229403; AAK00675.1; -.
HSSP; P15737; 10HS.
 Q9AXX2
 Q9AXX0
 NCBI_TaxID=3711;
 Brassica campestris
 SEQUENCE
 STRAIN-CV.
 NCBI_TaxID=3708;
 STRAIN-CV.
 SEQUENCE FROM N.A.
 Pfam;
 Fourmann M., Froger N., Brunel D., "Amplified consensus gene markers:
 SEQUENCE
 [nterPro;
 ,3 GLUCAN-BN-1
 28
 54
 29
 60
 3 GLUCAN-BR-2
 1 NLDA 4
 NLDA 57
 NLDA
 NLDA 4
 P15737; 1GHS.
Pro; IPR000490; Glyco_hydro_17.
PF00332; Glyco_hydro_17; 1.
 Pro; IPR000490; Glyco_hydro_17, pF00332; Glyco_hydro_17; 1.
 4;
 Similarity
 4;
 63
 R500;
 DARMOR-BZH;
 83 AA;
 85
 (TrEMBLrel.
 Conservative
 100.0%; ilarity 100.0%; Conservative
 (TrEMBLrel.
 PRELIMINARY;
 PRELIMINARY;
 83
 85
 AA;
 9276 MW;
 9436
 (Fragment).
 (Field mustard)
 17, Created)
17, Last sequence up
19, Last annotation
 ¥.
 Created)
Last sequence up
 0;
 0;
 6BF64CE399FC9BCC CRC64;
 10A5AF6342704506 CRC64;
 Pred. No.
 Score
 Mismatches
 Mismatches
 Tools designing s in Brassica.";
 20;
 83
 85
 Brassica
 5.4e+02;
 Embryophyta;
 DB 10;
 A
 update)
 update)
 update)
 0;
 0;
 core eudicots;
 Length 83;
 Indels
 Indels
 for a
 Tracheophyta;
 genetic
 genetic
 0;
 0,
 Gaps
 Gaps
 0,
 0
```

```
RESULT
Q8T641
ID Q8
AC Q8
DT 01
DT 01
DT 01
 RESULT
Q8X6S5
 밁
 δ
 밁
 Ş
 Query Match
Best Local S
Matches 4
 Query Match
Best Local Similarity
Matches 4; Conserv
 01-MAR-2002 (TrEMBLrel. 20, Cr. 01-MAR-2002 (TrEMBLrel. 20, La. 01-JUN-2002 (TrEMBLrel. 21, La. Glutaredoxin1 redox coenzyme f. ribonucleotide reductase GRXA OR Z1076 OR ECS0929. Escherichia coli 0157:H7.
 Q8T641;
Q8T641;
01-JUN-2002
01-JUN-2002
01-JUN-2002
 SEQUENCE FROM N.A.

STRAIN-0157:H7 / RIMD 0509952;

MEDLINE-21156231; PubMed-11258796;

MEDLINE-21156231; PubMed-11258796;

Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoya Hayashi T., Makino K., Ohnishi M., Kurokawa T., Tanaka M., Tobe T. Iida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasunag Kuhara S., Shiba T., Hattori M., Shinagawa H.;

"Complete genome sequence of enterohemorrhagic Escherichia coli 0157:H7 and genomic comparison with a laboratory strain K-12.";

DNA Res. 8:11-22 (2001).

EMBL; AB005266; AAG55225.1; -.

EMBL; AB005263; BAB34352.1; -.

EMBL; AB005263; BAB34352.1; -.
 Rose D.J., Mayhew G.F., Evans P.S., Gregor J., Kirkpatrick H.A., Posfal G., Hackett J., Klink S., Boutin A., Shao Y., Miller L., Grotbeck E.J., Davis N.W., Lim A., Dimalanta E.T., Potamousis K., Apodaca J., Anantharaman T.S., Lin J., Yen G., Schwartz D.C., Welch R.A., Blattner F.R.; "Genome sequence of enterohaemorrhagic Escherichia coli 0157:H7."
 SEQUENCE FROM N.A.
STRAIN-0157:H7 / EDL933 / ATCC 700
MEDLINE-21074935; PubMed-11206551;
 Complete proteome. SEQUENCE 85 AA;
 Q8x6S5;
 PROSITE; PS00195; GLUTAREDOXIN;
 PRINTS; PR00160;
 InterPro; IPR002109; Glutaredoxin
InterPro; IPR000063; Thiored.
 Nature 409:529-533(2001).
 NCBI_TaxID=83334;
 Escherichia
 Bacteria; Proteobacteria;
 Q8X6S5
 31
 30
 82 NLDA
 61
 1 NLDA 4
 1 NLDA 4
 NLDA
 PF00462;
 Similarity
 85
 64
 (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
 100.0%; ilarity 100.0%; Conservative
 Conservative
 PRELIMINARY;
 PRELIMINARY;
 glutaredoxin; 1.
 GLUTAREDOXIN.
 9695 MW;
 100.0%;
 21,
21,
21,
 gamma
Created)
Last sequence update)
Last annotation update)
 Created)
Last sequence update)
Last annotation update)
e for glutathione-dependent
 0,
 0
 Score 20;
Pred. No.
 8C3C15A473ED2041 CRC64;
 Score 20; DB 16;
Pred. No. 5.5e+02;
; Mismatches 0;
 PRT;
 700927;
 subdivision; Enterobacteriaceae;
 Mismatches
 86
 85
 DB 10;
5.5e+02;
 Escherichia coli 0157:H7.";
 ₽
 B
 0
 0,
 Length
 Length
 Indels
 Indels
 85;
 Yasunaga
 Yokoyama K.,
 0
 0;
 Gaps
 Gaps
 ...
...
 0
 0
```

```
RESULT 32
Q9X5H7
 RESULT
Q9AKH6
 RR OCC OCC DIT DA
 B
 Ş
 밁
 δÃ
 Query Match
Best Local S
Matches 4
 Query Match
Best Local (
 Matches
 01-JUN-2001 (TrEMBLrel. 17, La. 01-DEC-2001 (TrEMBLrel. 19, La. Hypothetical 9.3 kDa protein. Rickettsia rickettsii. Bacteria:
 Q9AKH6;
01-JUN-2001
 Q9AKH6
 STRAIN-ATCC 43504;
MEDLINE-99214098; PubMed=10198012;
MCGee D.J., May C.A., Garner R.M.,
"Isolation of Helicobacter pylori (
 Helicobacter pylori (Campylobacter pylori).
Bacteria; Proteobacteria; epsilon subdivision; Helicobacter group;
Helicobacter.
 01-NOV-1999
 Q9X5H7;
 Integrin betaPS (Fragment).

Manduca sexta (Tobacco hawkmoth) (Tobacco hornworm).

Bukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;

Pterygota; Neoptera; Endopterygota; Lepidoptera; Glossata; Ditrysia;

Sphingiodaa; Sphingidae; Sphinginae; Manduca.
 Rickettsiaceae;
NCBI_TaxID=783;
 HELA.
 01-JUN-2000
 Q9X5H7
 NON_TER
 Submitted (FEB-2002) to the EMBL; AF487332; AAL93261.1;
SEQUENCE FROM N.A.
 SEQUENCE
 EMBL;
 activity.";
 HelA.
 SEQUENCE
 Bunch T.A., Miller
"Mutations in the
 SEQUENCE FROM N.A. Bunch T.A., Miller
 NCBI_TaxID=7130;
 SEQUENCE FROM N.A.
 NCBI_TaxID=210;
 integrin regulation."
 ω
ω
 57 NLDA 60
 56 NLDA
 1 NLDA 4
 Bacteriol. 181:2477-2484(1999).
BL; AF125214; AAD27694.1; -.
QUENCE 88 AA; 10190 MW; 6C30
 1 NLDA 4
 4.
 Similarity
 Similarity
 59
 86 AA;
 (TrEMBLrel.
 (TrEMBLrel.
 Conservative
 PRELIMINARY;
 Conservative
 PRELIMINARY;
 86
 obacteria; alpha subdivision; Rickettsieae; Rickettsia.
 er S.W.,
 9488
 86
 100.0%;
 100.0%;
 12,
14,
 , Brower
loop of
 MW;
 Last sequence up
 0;
 0;
 Last sequence up
 EMBL/GenBank/DDBJ
 Created)
 Created)
 Score 20; DB Pred. No. 5.6); Mismatches
 6110C0042436FDA1 CRC64
 Score 20;
Pred. No.
 PRT;
 6C301645517BD2E3 CRC64;
 D.L.
 Mismatches
 genes
 Himpsl J.M., Mobley genes that modulate u
 Drosophila betaPS subunit affect
 89
 G
 5.6e+02;
 DB 2;
5.7e+02;
 A
 DΒ
 Ą
 update)
 update)
 5,
 update)
 update)
 Rickettsiales;
 databases
 0;
 Length 86
 Length
 Indels
 Indels
 H.L.T.;
 0
 0;
 Gaps
 Gaps
 0
 0
```

```
RESULT
Q9H4V4
 덩
 20
 RESULT
Q92J16
 ρ
 밁
 Query Match
Best Local S
Matches 4
 Query Match
Best Local
 Matches
 Q9H4V4;
Q9H4V4;
Q9H4V4;
Q1-MAR-2001 (TrEMBLrel. 16, Created)
Q1-MAR-2001 (TrEMBLrel. 16, Last sequence update)
Q1-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DJ1187J4.3 (Novel protein similar to rat RYF3) (F
 NON_TER
 Bird C.;
Submitted
 Q92J16;
Q92J16;
Q1-DEC-2001
01-DEC-2001
01-DEC-2001
 Homo sapiens (Human)
Eukaryota; Metazoa; (
Mammalia; Eutheria;
 Q9H4V4
 Submitted (MAR-2001) to the EMBL; AL355392; CAC15882.1; NON TER 1 1
 SEQUENCE
 NCBI_TaxID=9606;
 Hypothetical protein; Complete SEQUENCE 89 AA; 9402 MW; EE
 MEDLINE=21442074; PubMed=11557893;
Ogata H., Audic S., Renesto-Audiffren
Samson D., Roux V., Cossart P., Weisse
 SEQUENCE FROM N.A. STRAIN-MALISH 7;
 Bacteria; Proteobacteria; alpha subdivision; Rickettsiales; Rickettsiaceae; Rickettsieae; Rickettsia. NCBI_TaxID=781;
 Hypothetical RC0253.
 "Mechanisms of evolution in Rickettsia Science 293:2093-2098(2001).
 Raoult
 Rickettsia
 Hypothetical SEQUENCE 8
 MO1. Biol. Evol. 18:829-839
EMBL; AJ293320; CAC33684.1;
 MEDLINE=21219194; PubMed=11319266; Andersson J.O., Andersson S.G.E.; Pseudogenes, junk DNA and the dynamics
 STRAIN=84-21C;
MEDLINE=21219194;
 35
 34
 35 NLDA 38
 ω
5
 1 NLDA 4
 1 NLDA 4
 NLDA 38
 AE008592; AAL02791.1;
 ם ם
 4;
 Similarity
 FROM N.A.
 Similarity
 91
 1 (TrEMBLrel. 19, 1 (TrEMBLrel. 19, 1 (TrEMBLrel. 19, 1 (TrEMBLrel. 19, 1 al protein RC0253.
 conorii.
 89
 Conservative
 PRELIMINARY;
 PRELIMINARY;
 Conservative
 8
 protein
 AA;
 18:829-839(2001).
 9774
 Chordata;
Primates;
 9331 MW;
 100.0%;
 100.0%;
 WW,
 EMBL/GenBank/DDBJ
 0,
 Last annotation
 Last
 0
F351A7560E7387BD CRC64
 Created)
 ED502B6FC370ADB7 CRC64;
 Score 20;
Pred. No.
 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
 8CF96A2C7A4B29A2 CRC64;
 PRT;
 Score 20;
Pred. No.
 Weissenbach
 Mismatches
 Mismatches
 sequence update)
 rat RYF3) (Fragment)
 Р.,
 91
 9
 conorii and
 G
 of Rickettsia genomes.";
 B
 DB 16;
 A
 DВ
 .8e+02;
 Fournier P.-E.,
ch J., Claverie
 .8e+02;
 2
 update)
 databases
 0,
 0,
 Length
 Length
 Indels
 Indels
 R. prowazekii."
 89
 89;
 Barbe
 0;
 0;
 Gaps
 Gaps
 0;
 0;
```

```
RESULT ON PROBLET ON P
 В
 Qy
 Matches
 Query Match
Best Local Similarity
 Kunst F. Ogasawara N. Moszer I., Albertini A.M., Alloni G., Azevedo V., Bertero M.G., Bessieres P., Bolotin A., Borchert S., Borriss R., Boursier L., Brans A., Braun M., Brignell S.C., Bron S Brouillet S., Bruschi C.V., Caldwell B., Capuano V., Carter N.M., Choi S.K., Codani J.J., Connerton i.F., Cummings N.J., Daniel R.A. Denizot F., Devine K.M., Dusterhoft A., Ehrlich S.D., Emmerson P.T Entian K.D., Errington J., Fabret C., Ferrari E., Foulger D., Fritz C., Fujita M., Fujita Y., Fuma S., Galizzi A., Galleron N., Ghim S.Y., Glaser P., Goffeau A., Golightly E.J., Grandi G., Guiseppi G., Guy B.J., Haga K., Haiech J., Harwood C.R., Henaut A. Hilbert H., Holsappel S., Hosono S., Hullo M.F., Itaya M., Jones I. Joris B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Joris B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C.,
 JOTIS B. Karamata D. Kasahara Y., Klaerr-Blanchard M., Klein C Kobayashi Y., Koetter P., Koningstein G., Krogh S., Kumano M., Kurita K., Lapidus A., Lardinois S., Lauber J., Lazarevic V., Lee S.M., Levine A., Liu H., Masuda S., Mauel C., Medigue C., Medina N., Mellado R.P., Mizuno M., Moestl D., Nakai S., Noback I Noone D., O'Reilly M., Ogawa K., Ogiwara A., Oudega B., Park S.H. Parro V., Pohl T.M., Portetelle D., Porwollik S., Prescott A.M., Presecan E., Pujic P., Purnelle B., Rapport G., Rey M., Reynolds Rieger M., Rivolta C., Rocha E., Roche B., Rose M., Sadaie Y., Sato T., Scanlan E., Schleich S., Schroeter R., Scoffone F., Scoffone F., Schleich S., Schroeter R., Scoffone F., Schleich S., Schroeter R., Scoffone F., Schleich S., Schlei
 Kunst F.,
 Sato T., Scanlan E., Schleich S., Schroeter R., Scoffone F., Sekiguchi J., Sekowska A., Serot S.J., Serot P., Shin B.S., Sorokin A., Tacconi E., Takagi T., Takahashi H., Takemaru K., Takeuchi M., Tamakoshi A., Tanaka T., Terpstra P., Tognoni A., Tosato V., Uchiyama S., Vandenbol M., Vannier F., Vassarotti Viari A., Wambutt R., Wedler E., Wedler H., Weitzenegger T., Wilnters P., Wipat A., Yamamoto H., Yamane K., Yasumoto K., Yat
 STRAIN=168
 "The complete genome subtilis.";
 Winters P., Wipat A.,
Yoshida K., Yoshikawa
 Sorokin A., Bolotin A., F
Duesterhoeft A., Ehrlich
Submitted (MAY-1997) to t
 007938;
 SEQUENCE
 Nature
 MEDLINE=98044033;
 STRAIN=168
 SEQUENCE FROM
 STRAIN-168;
 Belitsky B.R., Gustafsson M.C.U.,
Submitted (APR-1997) to the EMBL/
 01-JUL-1997
01-MAR-2002
 SEQUENCE FROM N.A.
 STRAIN=1A1;
 Bacillaceae;
 Bacteria; Firmicutes;
 Bacillus subtilis.
 Hypothetical
 SEQUENCE
 NCBI_TaxID=1423;
 36
 52 NLDA 55
 1 NLDA 4
 390:249-256(1997)
 4.
 Ogasawara
 (Tremburel.) (Tremburel.) (Tremburel.)
 PRELIMINARY;
 Conservative
 Bacillus
 protein
 N.A
 PubMed=9384377;
 Z.
 sequence
 yrdf.
 H.F., Zumstein E., Yoshikawa H., Danchin A.;
sequence of the gram-positive bacterium Bacillus
 100.0%;
 Bacillus/Clostridium
 Yoshikawa
 Purnelle
h S.D.;
 the EMBL/GenBank/DDBJ
 04,
 EMBL/GenBank/DDBJ
 0;
 Last
 Created
 Last
 Score
Pred.
 Mismatches
 sequence u
annotation
-#
:
 Sonenshein A.L.,
 NO.
 Hilbert
Danchin
 91
 DB 4;
6e+02;
 B
 update)
 group; Bacillales;
 н.,
 ₽.
 databases
 databases
 0
 Length
 Lauber
 Indels
 von Wachenfeldt C.;
 arter N.M.,
Daniel R.A.,
 91
 Reynolds S.,
 Henaut A.,
 Bron S.,
 Soldo
 0;
 .н.,
 м.,
 Gaps
 L.,
 в.
 0
```

```
RESULT
OPRESZ
ID PRESZ
OPPESZ

 A CONTRACTOR OF THE CONTRACTOR
 RESULT
Q97KS3
 밁
 Q
 밁
 á
 DR SQ
 Query Match
 Matches
 01-OCT-2001
01-OCT-2001
01-JUN-2002
 O9R5Z2
O9R5Z2
O9R5Z2;
O1-MAY-2000 (TrEMBLrel. 13, Created)
O1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
O1-MAY-2000 (TrEMBLrel. 13, Last annotation update)
SSB16=(GAL4(1-147))-SSB16 transcriptional repressor
 Complete
SEQUENCE
 Noelling J., Breton G., Omelchenko M.V., Makar Gibson R., Lee H.M., Dubois J., Qiu D., Hitti Tatusov R.L., Sabathe F., Doucette-Stamm L., Sennett G.N., Koonin E.V., Smith D.R.; "Genome sequence and comparative analysis of t "Genome sequence and comparative distribution."; J. Bacterium Clostridium acetobutylicum."; J. Bacteriol, 183:4823-4838(2001).
 InterPro; IPR000468; Barstar.
Pfam; PF001337; Barstar; 1.
ProDom; PD029050; Barstar; 1.
Hypothetical protein; Complete
SEQUENCE 91 AA; 10728 MW; F
 SEQUENCE FROM N.A. STRAIN-ATCC 824 /
 Clostridium acetobutylicum.

Bacteria; Firmicutes; Bacillus/Clostridium group; Clostridia; Clostridiales; Clostridiaceae; Clostridium.
 EMBL; Y11043; CAA71938.1; -. EMBL; U93876; AAB80899.1; -. EMBL; Z99117; CAB14614.1; -. HSSP; P11540; 1B2U.
 Escherichia
 Bacteria;
 Escherichia
 ProDom; PD029050;
 InterPro; IPR000468; Barstar.
Pfam; PF01337; Barstar; 1.
 STRAIN-ATCC 824 / DSM 792 / VKM B-1787;
MEDLINE-21359325; PubMed-11466286;
 CAC0844
 Barstar-like
 Q97KS3
 Submitted (NOV-1997)
 38
 37
 34
 Local
 34 NLDA 37
 Local
 1 NLDA 4
 Match
 1 NLDA 4
 NLDA
 Similarity
4; Conserv
 Similarity
4; Conserv
 proteome.
91 AA;
 Proteobacteria;
 37
 (TrEMBLrel. 18, (TrEMBLrel. 18, (TrEMBLrel. 21,
 coli
 Conservative
 PRELIMINARY;
 protein
 Barstar; 1.
 10821 MW;
 ç
 100.0%;
 ribonuclease
 100.0%;
 the EMBL/GenBank/DDBJ databases
 gamma
 Created)
Last sequence update)
Last annotation update)
clease (barnase) inhibitor.
 0;
 0,:
 Score 20; DB
Pred. No. 6e+
); Mismatches
 Score 20;
Pred. No.
 F001CB84888DAllB CRC64;
 AD4B022BC9FCCB8E CRC64;
 subdivision;
 Mismatches
 91
 6e+02;
 , Makarova K.S.,
Hitti J., Wolf Y
n L., Soucaille P
 6e+02;
 DB 16;
 DΒ
 16;
 the solvent-producing
 Enterobacteriaceae
 0;
 0
 Length 91;
 Length
 Indels
 component.
 ₽.,
 91;
 Daly M.J.,
 0;
 0;
 0
 Gaps
 Gaps
 0;
 0;
```

```
SO REAR
 밁
 Qy
 Query
Best I
 Matches
 Q99н35;
Q99н35;
SEQUENCE FROM N.A. SPECIES-Heliocoverpa Chen X., IJkel W.F.,
 Peters S., Zuidema D., Lankhorst R.K., Vla
"The Sequence of the Helicoverpa armigera
nucleopolyhedrovirus genome.";
J. Gen. Virol. 82:241-257(2001).
 Wang H., Chen X., Wang H., Arif B.M., Vlak J.M., Hu Z.; "Nucleotide sequence and transcriptional analysis of a puta DNA-binding protein of Helicoverpa armigera polyhedrovirus. Virus Genes 22:113-120(2001).
 SPECIES-Heliocoverpa armigera nucleopolyhedrovirus G4; beng F., Chen X., Vlak J.M., Arif B.M., Hu Z.; "Sequence analysis of the gp37 gene of Heliothis armigera nucleocapsid nucleopolyhedrovirus."; zhongguo Bingduxue 15:35-42(2000).
 01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
0RF12 (Hypothetical 10.8 kDa protein).
Helicoverpa zea single nucleocapsid nucleopolyhedrovirus,
Helicoverpa armigera nucleopolyhedrovirus 64, and
Helicoverpa armigera nucleopolyhedrosis virus.
Viruses; dsDNA viruses, no RNA stage; Baculoviridae;
Nucleopolyhedrovirus.
 Saha S., Brickman J.M., Lehming N., Ptashne "New eukaryotic transcriptional repressors. Nature 363:648-652(1993).
 SPECIES-Heliocoverpa armigera nucleopolyhedrovirus MEDLINE-21064569; PubMed-11125177; Chen X., IJkel W.F., Tarchini R., Sun X., Sandbrini Peters S., Zuidema D., Lankhorst R.K., Vlak J.M.,
 Wang H., Hu Z., Sun X., Vlak J.M., Chen X.;
"Sequence analysis of the lap3 gene of Heliothis armigera
nucleocapsid nucleopolyhedrovirus.";
Zhongguo Bingduxue 15:43-49(2000).
 SPECIES-Helicoverpa zea single nucleocapsid nucleopolyhedrovirus; Chen X., Zhang W.-J., Wong J., Chun G., Lu A., McCutchen B.F., Presnail J.K., Herrmann R., Dolan M., Tingey S., Hu Z.-H., Vlak J "Genome sequence analysis of Helicoverpa zea single nucleocapsid
 SPECIES=Heliocoverpa armigera nucl
MEDLINE=21078302; pubMed=11210934;
 SPECIES=Heliocoverpa armigera
 SEQUENCE FROM
 SEQUENCE FROM N.A.
 SEQUENCE FROM
 Znongguo
[4]
 SEQUENCE FROM N.A.
 Submitted
 nucleopolyhedrovirus
 SEQUENCE FROM N.A.
 NCBI_TaxID=10468,
 39
 60
 Local
 Match
 1 NLDA 4
 NLDA 63
 similarity 100.
4; Conservative
 (JAN-2001)
 PRELIMINARY;
 N.A.
 148363,
armigera
Tarchini
 to the EMBL/GenBank/DDBJ databases
 archini R., Sun X., Sandbrink I
Lankhorst R.K., Vlak J.M., Hu
 . 0%;
 .0%;
 51313;
 0;
 Score 20; DB Pred. No. 6e+
); Mismatches
nucleopolyhedrovirus R., Sun X., Sandbrin
 nucleopolyhedrovirus
 nucleopolyhedrovirus
 C2F01CE9D1B15245
 Ptashne M.;
 92
 6e+02;
 DB 2;
 single-nucleocapsid
 Sandbrink H.,
 Sandbrink H.,
 CRC64;
 Length 92;
 Indels
 G4;
 a putative ovirus.";
 Wang
 single-
 single-
 0;
 Ή.,
 J.M.;
 basic
 Gaps
 0
```

```
Qy
 맑
 RESULT
Q8ZAU6
 밁
 δÃ
 Query Match
Best Local S
Matches 4
 Best Loc
Matches
 SEQUENCE FROM N.A.

STRAIN-CO-92 / BIOVAR ORIENTALIS;

MEDLINE-21470413; PubMed-11586360;

Parkhill J., Wren B.W., Thomson N.R., Titball R.W., Holden M.T.G.,

Prentice M.B., Sebaihia M., James K.D., Churcher C., Mungall K.L.,

Baker S., Basham D., Bentley S.D., Brooks K., Cerdeno-Tarraga A.M.,

Chillingworth T., Cronin A., Davies R.M., Davis P., Dougan G.,

Feltwell T., Hamlin N., Holroyd S., Jagels K., Karlyshev A.V.,

Leather S., Moule S., Oyston P.C.F., Quail M., Rutherford K.,

Simmonds M., Skelton J., Stevens K., Whitehead S., Barrell B.G.;
 Query Match
 InterPro: IPR000468; Barstar.
Pfam; PF01337; Barstar; 1.
Hypothetical protein; Complet.
SEQUENCE 93 AA; 10739 MW;
 01-MAR-2002 (TrEMBLrel. 20, Creat
01-MAR-2002 (TrEMBLrel. 20, Last
01-JUN-2002 (TrEMBLrel. 21, Last
Putative ribonuclease inhibitor
 Yersinia pestis.
Bacteria; Proteobacteria;
 NCBI_TaxID=632;
 Yersinia
 YP03690.
 Q8ZAU6
 SPECIES=Helicoverpa armigera nuclear polyhedrosis virus; STRAIN=C1 zhang C.x., Jin W.R.; Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
 Sheng
[8]
 SPECIES=Helicoverpa
Zhang C.X., Wu J.C.;
 Hypothetical properties of the second of the
 "Genome structure and the nucleopolyhedrovirus.";
 SEQUENCE FROM N.A.
 Peters S.,
Submitted
 EMBL;
 EMBL;
 InterPro;
34
 40
 EQUENCE FROM N.A.
 ب
 67 NLDA 70
 Local
 1 NLDA 4
 NLDA 4
NLDA 37
 AF334030; AAL56157.1;
AF271059; AAG53755.1;
AF303045; AAK96267.1;
Pro; IPR002557; Chitin
 PF01607; CBM_14; 1.
; SM00494; ChtBD2; 1.
 4;
 Similarity
 Similarity
 Hua Hsueh
 (MAY-2000) t
 Conservative
 100.0%;
llarity 100.0%;
Conservative
 PRELIMINARY;
 protein
 AA;
 10780 MW;
 Yu Sheng Wu
 armigera nuclear polyhedrosis virus; STRAIN=C1;
 100.0%;
 Chitin_bind_PerA.
 Complete
 ö
 Lankhorst R.K., Vlak J.M.,
 the EMBL/GenBank/DDBJ databases
 gamma
 p10
 0;
 Last
 Last annotation
 Created)
 0,
 Score
Pred.
 proteome.
E71C24C8A9936F7B CRC64;
 Score 20;
Pred. No.
 9628054EDE3C4ED3 CRC64;
 gene
 Wu
 subdivision; Enterobacteriaceae;
 Mismatches
 sequence update)
 Li Hsueh
 NO ;
 0f
 93
 the Helicoverpa armigera
 6.1e+02;
 6e+02;
 DB 16;
 AΑ
 DВ
 12;
 Pao 33:179-184(2001).
 update)
 0;
 Length 93;
 Length 92;
 Indels
 Indels
 Hu
 agent of plague.";
 2.;
 0;
 0;
 Gaps
 Gaps
 0;
 0;
```

```
RESULT
079692
 Q9K0G0
ID Q9K0G0
AC Q9K0G
DT 01-OC
DT 01-OC
DT 01-OC
DT 01-OC
DT 01-OC
DT Ribon
GN NW168
OC NC18
RP SEQUE
RR SEQUE
RR E15en
RA Haft
RA Haft
RA Mason
RA G111
RA Mason
RA Cotto
Cotto
RA Haft
RA Mason
RA G111
RA Mason
RA Mason
RA Mason
RA Mason
RA Mason
RA Mason
R
 В
 δÃ
 Matches
 Query Match
Best Local :
 079692;
01-NOV-1998
01-NOV-1998
01-DEC-2001
Cytochrome b
(Aves: Tyrannides).";

MO1. Phylogenet. Evol. 11:67-76(199).

MO2. Phylogenet. Evol. 11:67-76(199).

MO2. Phylogenet. Evol. 11:67-76(199).

MO3. Phylogenet. Evol. 11:67-76(199).

MO3. Phylogenet. Evol. 11:67-76(199).

MO3. Phylogenet. Complex of the Uniquence of the Parties an electrochemical Coupled to any Synthesis (By Similarity).

MO3. Phylogenet. Evol. 12:62 and B563 which are Bound to the Protein (By Similarity).

MO3. Phylogenet. Complex of the Protein (By Similarity).
 MEDLINE=99184959; PubMed=10082611; Roy M.S., Torres-Mura J.C., Hertel, F.; Molecular phylogeny and evolutionary
 CYTB.
Stigmatura napensis.
 STRAIN-MC58 / SEROGROUP B;

MEDLINE-2017575; PubMed-10710307;

Tettelin H., Saunders N.J., Heidelberg J., Jeffries A.C., Nelson Eisen J.A., Ketchum K.A., Hood D.W., Pedens J.F., Dodson R.J., Nelson W.C., Gwinn M.L., DeBoy R., Peterson J.D., Hickey E.K., Haft D.H., Salzberg S.L., White O., Fleischmann R.D., Dougherty E Mason T., Ciecko A., Parksey D.S., Blair E., Cittone H., Clark E., Cotton M.D., Utterback T.R., Khouri H., Oln H., Vamathevan J., Gill J., Scarlato V., Masignani V., Pizza M., Grandi G., Sun L., "Complete genome sequence of Neisseria meningitidis serogroup B s."."
 01-OCT-2000
01-OCT-2000
01-DEC-2001
 "Molecular phylogeny and (Aves: Tyrannidae).";
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Passeriformes; Tyrannidae; Stigmatura.
 079692
 SEQUENCE FROM N.A.
 NCBI_TaxID=83304;
 Mitochondrion
 Complete proteome. SEQUENCE 95 AA;
 Science 287:1809-1815(2000).
EMBL; AE002419; AAF41067.1;
HSSP; P11540; 1B27.
 InterPro; IPR000468; Barstar.
Pfam; PF01337; Barstar; 1.
 TIGR;
 SEQUENCE FROM N.A.
STRAIN=MC58 / SEROGROUP
 MC58.
 Ribonuclease inhibitor barstar.
 NCBI_TaxID=491;
 Bacteria; Proteobacteria;
 Neisseria meningitidis (serogroup B)
 NMB0646
 Q9K0G0,
 Q9K0G0
 42
 33 NLDA
 Local Similarity
 1 NLDA 4
 NMB0646;
 PD029050; Barstar; 1.
 ۵
 (TrEMBLrel.) (TrEMBLrel.) (TrEMBLrel.)
 PRELIMINARY;
 Conservative
 (TrEMBLrel. 15,
(TrEMBLrel. 15,
(TrEMBLrel. 19,
 (Fragment).
 (TrEMBLrel.
 PRELIMINARY;
 11385 MW;
 100.0%;
 08,
 beta
 Created)
Last sequence update)
Last annotation updat
 0,
 Last
 Created)
 PRT;
 Score 20; I
 D79ABA9C84DD77B3 CRC64;
 PRT;
 subdivision;
 Mismatches
 annotation
 sequence
 .
:
 history
 96
 95
 DB 16;
6.2e+02;
 AA
 A
 update)
 Neisseriaceae;
 update)
 of the tit-tyrants
 Length
 Indels
 REDUCTASE, WHICH IS A
 NOT COVALENTLY
 Neisseria.
 0;
 Gaps
 strain
 X.E.,
 0,
```

```
SO FIELD CCC
 밁
 ş
 RESULT
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottler P.,
RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA Cherry J.M., Cawley S., Dahlke C., Davenportt L.B., Davles P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenportt L.B., Davles P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,
RA Dolchan M.E., Garg N.S., Gelbart W.M., Glasser K.,
RA Dolchan A.E., Garg N.S., Gelbart W.M., Glasser K.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Mount S.M., Welson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Molson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T.,
RA Shue B.C., Stapleton M., Strong R., Sun E.,
RA Wallsiams S.M., Woodseg T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Yelson D.R., Pacleb J.M., Walssenbach J.,
RA Yelson S.M., Woodseg T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Zheng X.H., Zhong F.N., Zhong W., Zhong S., Zhoo Q., Zheng L.,
 Query Match
Best Local :
 Matches
 Eukaryota; Me
Pterygota; Ne
Ephydroidea;
 01-MAY-2000
01-MAY-2000
01-JUN-2002
 Abril J.F., Agbayani A., An H. J., Andrews Pfannkoch C., Baldwin D., Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M., Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S., Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P., Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
 Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D., Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F., George R.A., Lewis S.E., Richards S., Asburner M., Henderson S.N., George R.A., Lewis S.E., Yandell M.D., Zhang Q., Chen L.X., Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X., Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D., Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G., Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
 Pfam;
 CG10834 protein.
 Q9V9P1;
 Q9V9P1
 SEQUENCE
 Transmembrane.
 MEDLINE=20196006; PubMed=10731132;
 STRAIN-BERKELEY
 SEQUENCE FROM N.A.
 NCBI_TaxID=7227;
 Drosophila
 Electron transport; Heme; Mitochondrion;
 InterPro;
 43
 55
 1 NLDA 4
 CYTOCHROME C1 AND THE RIESKE PROTEIN (BY SIMILARITY).
SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
 NLDA 58
 Pro; IPR000179; Cyt_b_b6.
PF00033; cytochrome_b_N;
 AF067000;
 4;
 Similarity
 melanogaster (Fruit fly).
Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
a; Drosophilidae; Drosophila.
) (TrEMBLrel.) (TrEMBLrel.) (TrEMBLrel.)
 96 AA;
 Conservative
 PRELIMINARY;
 96
 AAC64030.1;
 1
96
10930 MW;
 100.0%;
 13,
13,
21,
 Created)
Last sequence update)
Last annotation updat
 0
 Pred.
 PRT;
 Score 20;
 BB0CD4B5CB7B9FE7 CRC64;
 ۳.
 Mismatches
 No.
 97
 6.3e+02;
 Respiratory chain;
 ξ
 DΒ
 8,
 update)
 0;
 Length 96
 Indels
 0;
 Gaps
 H.O.,
 .
A.,
 ≅.
```
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
RESULT 45
020641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OCCOORDED CONTROL OF THE PROPERTY OF THE PROPE
  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RA DR RT DR DR DR DR DR
                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gibbs R.A., Myers E.W., Rubin G.
"The genome sequence of Drosophi
Science 287:2118-7.2195(2000).
EMBL; AE003782; AAF57245.1; -
FlyBase; FB900032972; CG10834.
InterPro; IPR004942; Robl_LC7.
Pfam; PF03259; Robl_LC7; 1.
SEQUENCE 97 AA; 10922 MW; A9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAY-2000
01-MAY-2000
01-JUN-2002
                                                                                                                                                                                    CYTB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON_TER
                                                           Eukaryota; Metazoa; Chordata; Craniata; Verte
Actinopterygii; Neopterygii; Teleostei; Eute:
Acanthomorpha; Acanthopterygii; Percomorpha;
Anabantoidei; Anabantidae; Anabas.
                                                                                                                                                                                                                        01-JAN-1998 (TrEMBLrel.
01-JAN-1998 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "mer sequences on plasmids."
Submitted (SEP-1998) to the
EMBL; AF092066; AAD52702.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pseudomonas putida.
Plasmid phytosphere-derived plasmid
Bacteria; Proteobacteria; gamma sub
                                                                                                                                           Mitochondrion.
                                                                                                                                                              Anabas testudineus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bruce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9R9X3
SEQUENCE FROM N.A
                                        NCBI_TaxID=64144;
                                                                                                                                                                                                       Cytochrome b
                                                                                                                                                                                                                                                                                       020641;
                                                                                                                                                                                                                                                                                                            020641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF02852; pyr_redox_dim;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSSP; P11959; 1EBD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pseudomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MerA (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                1 NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                              NLDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NLDA 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NLDA 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    K.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IPR004099; pyr_redox_dim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lilley
                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                       (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10480 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                          05,
19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13,
13,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drosophila melanogaster.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rubin G.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bailey M.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 20; DB
Pred. No. 6.7
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 20; DB Pred. No. 6.4); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A9BAFD9A5686F1A2
                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AB1520C13621FF89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Venter J.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                          102
                                                                                Vertebrata; Euteleostomi;
Euteleostei; Neoteleostei
rpha; Perciformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pseudomonadaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                     Neoteleostei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

```
RC STRAIN-TES1;
RA Chan W.C., Lee P.G.;
RT morphological data.";
R. Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases.
R. Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases.
CC c. I- FUNCTION: COMPONENT OF THE UBLQUINGL-CYTOCHROME C REDUCTASE
CC C. COMPONENT SII OR CYTOCHROME B-C1 COMPLEX), WHICH IS A
CC C. COMPLEX (COMPLEX III OR CYTOCHROME B-C1 COMPLEX), WHICH IS A
CC C. I- SUBUNTS CHAN THAT GENERATES AND ELECTROCHEMICAL POTENTIAL
CC C. I- COPACTOR: TWO HEME GROUPS (B5C3 AND B56) WHICH ARE NOT COVALENTLY
CC BOUND TO THE PROTEIN (BY SIMILARITY).
CC I- SUBUNIT: THE MAIN SUBUNITS OF COMPLEX B-C1 ARE: CYTOCHROME B,
CYTOCHROME C1 AND THE RIESKE PROTEIN (BY SIMILARITY).
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.
CT I- SIMILARITY: BELONGS TO THE CYTOCHROME B FAMILY.

CC I- SIMILARITY: BELONGS TO THE CYTOCHROME B
```